

## Decision Making Styles of Nursing Managers at Assiut University Hospitals and South Egypt Cancer Institute

Abeer Omran Attyat<sup>1</sup>, Sahar Mohamed Morsy<sup>2</sup>, & Eman Kamel Hossny<sup>3</sup>

<sup>1</sup> Nursing Specialist at South Cancer Institute, Assiut University, Egypt.

<sup>2</sup> Professor of Nursing Administration, Faculty of Nursing, Assiut University, Egypt.

<sup>3</sup> Assistant professor of Nursing Administration, Faculty of Nursing, Assiut University, Egypt.

### Abstract:

**Background:** Managers create many decisions by diverse styles. The style of decision-making is the educated continual response design shown by the manager when he needs to create a decision. **Aims:** To determine decision making styles of nursing managers at Assiut university hospitals. **Research design:** A descriptive design was used. **Setting:** This study was conducted at Assiut university hospitals and south Egypt cancer institute. **Subject:** The study subject consisted of (245) nursing managers. **Tools:** Two tools were used; socio demographic data and general decision making styles questionnaire. **Results:** Rational decision making style has had the highest mean score ( $20.95 \pm 2.03$ , 83.8%) in all selected hospitals, and the most dominant style among the three managerial levels. While the high mean score was for Rajhi liver hospital regarding rational style ( $21.78 \pm 1.68$ ). There were highly statistically significant differences between different selected hospitals regarding to intuitive and spontaneous styles ( $<0.001^{**}$ ,  $0.007^{**}$ ) respectively. With the highest mean scores for the both styles related to south Egypt cancer institute. **Conclusion:** The rational style is the most dominant styles and has the highest mean score at the top management and in Rajhy liver hospital. **Recommendation:** Provide nurse managers with training programs about decision making styles, to enhance their experience.

**Keywords:** *Decision Making, Styles & Nursing Managers.*

### Introduction:

In any organization, managers manage day-to-day operations and accomplish organizational affairs by leading activities through management processes of recruitment, selection, job description, organizing, planning, training, marketing, and policy application that fill through managerial activities. Without managers' the organization's activities would be confused (Chisengantambu-Winters, 2020).

According to García et al., (2020) There are three functional roles within nursing management, the operational nurse manager (implements his or her role at the unit level), the logistic nurse manager (implements his or her role at the department level), and the top nurse manager (implements his or her role at the organizational level).

Effective management needs nursing managers to improve strong decision making capabilities by applying good judgment and having an insight to any given situation because whatever a manager does, s/he does through making decisions. Thus, 'good' decision making is the central hallmark of a professional manager's skills, operational, and effectiveness (Weiss et al., 2019).

As well as every person has an exceptional way to deal with others, also has an exceptional style of leading others. In making organizational decisions,

the managers have different styles while making decisions. The styles of decision making are differing in their nature, efficacy, and effects. The style of manager in any organization affects the subordinates' individual life and their attitudes associated with work (Abood & Thabet, 2017).

The term decision style is the manner a person uses the information to express a decision. Decision style is still a cognitive process that includes one's personality with one's needs, values, and self-concept (Al Shra'ah, 2015). Berisha et al, (2018) revealed that decision making style reveals an individual characteristic for noticing and replying to a decision making process.

Several researchers (Rayner Riding, 1997) cited in (Kozhevnikov et al, 2014) defined decision making style in terms of cognitive style that is correlated to the information processing aspect of the mind. Decision researchers (Scott & Bruce, 1995) cited in (Bavol'ár & Orosová, 2015) have identified two main approaches to decision-making style. Firstly, decision-making styles can be assumed as a habitual pattern which individuals use in decision-making. Secondly, decision-making styles can be assumed as individuals' characteristic mode of noticing and replying to decision-making tasks.

In their later work, the same authors defined decision-making styles as "the learned habitual response pattern showed by an individual when provoked with a decision situation. It is not a personality trait, but a habit-based tendency to react in a certain way in a specific decision setting.

**Driver (1979)** cited in (**Alacreu-Crespo et al, 2019**) has explained that a decision style is just a habitual reply of an individual in decisional settings. Harren (1979) cited in (**Riaz, 2015**) explains that first individuals notice a decision situation and then give a reply through decisive actions.

Harren (1979) cited in (**Abubaker et al, 2019**) identified three styles including rational (decision based on logic, cognitive, and rationality), intuitive (decisions directed through feelings, emotions, and instincts), and dependent decision making styles (consultative and participative decision in which other's views and expectations are considered). Phillips, **Pazienza, & Ferrin (1984)** cited in (**Delaney et al, 2015**) identified an additional style known as the avoidant decision making style (indecision, avoidance, and deferral of the decision scenario). **Driver et al. (1993)** cited in (**Riaz, 2015**) accepted that there are five styles of decision-making and they include determinative, flexible, hierarchic, supplementary, and systematic decision-making.

**Bavolar & Bačíková-Slešková, (2018)** stated that **Scott & Bruce (1995)** based their model on the effort of Driver (1979) and introduced five decision making styles. **Scott & Bruce (1995)** grasped a deficiency in the current model and explained that the theoretical skeleton of research on decision making style was blurred. One of the many reasons for this ambiguity exists in the inaccessibility of proper tools to analyze research data on these styles. **Scott & Bruce (1995)** cited in (**Lamba & Ozdasli, 2015**) bridged this gap by developing a well-made instrument that measures five decision making styles including rational, intuitive, dependent, avoidant, and spontaneous decision making styles.

Five decision-making styles have been known as a result of a project built on four separate populations and labeled in behavioral expressions (**Scott & Bruce, 1995**). The first of them, the rational style, is described by the search for and logical assessment of options. The intuitive style is described by attention to detail and a tendency to rely on feeling while the dependent one is described by the search for and dependence on the advice of others. The avoidant style is the leaning to avoid decisions whenever the possible and the spontaneous style is described by a sense of immediacy and desire to complete the decision-making process as soon as possible (**Bavol'ár & Orosová, 2015**)

Managers use primary, secondary, and least favored decision making styles through three decision making situations. Only a few people bound themselves to a single style of decision making. Most people use two or three decision making styles. Decision researchers also favor the use of various styles in decision making instead of sticking to one stiff style. In fact by definition, the style-shift from one to the other differences a style from the traits which are relatively more constant and long-lasting. Thus managers have a dominant style of decision making which they most repeatedly use in their decisions. The dominant style is also known as the primary style of decision making. Alongside the dominant style, the managers use other styles of decision making as standby styles. Thus managers have a secondary style of decision making which they use when the primary style is not effective. Similarly, the managers have a least favored style of decision making which they use most irregularly (**Driver et al., 1993; Riaz, 2015**)

#### **Significance of the study:**

Today's corporate environment needs managers to be excellent decision makers. Their capability to make fast, smart, widely-supported, and effective decisions will, in large part, form the performance of their organizations. While the researcher reviewed of the literatures found that there internationally studies published in professional articles and journals titled by "Influence of Social Culture on Decision-Making Manner in Turkey" done by **Lamba & Ozdasli, 2015**; and there is a national study was performed by **Mohamed & Elrais, 2017**; titled: "factors affecting decision making among nurse managers and its relation to decision making styles" on Port Said hospitals at Egypt. Therefore, this research is done to aid nursing managers comprehend these styles and determine what the most very dominant decision making styles among managerial level and seek the proper style of decision-making.

#### **Aims of the study:**

The study aims to:

- Determine the most dominant decision making style among nursing managers at the selected hospitals.
- Determine the different decision making styles of nursing managers according to the three managerial levels.
- Determine the relation between decision making styles and socio demographic data of nursing managers.

#### **Research questions:**

**To fulfill aims of the present study, the following research questions are formulated:**

**Q1:** What is the most dominant decision making style among nursing managers at the selected hospitals?

**Q2:** What are the decision making styles of nursing managers according to the three managerial levels?

**Q3:** Are there a relationship between decision making styles and socio- demographic data of the nursing managers?

#### **Method**

##### **Research design:**

A descriptive design was used to carry out the present study.

##### **Study setting**

The present study conducted at hospitals in Assiut university namely; The main university hospital, pediatric health hospital, women health hospital and Rajhi liver hospital and south Egypt cancer institute.

##### **Subjects of the study:**

A convenience sample was used in the present study which includes all nursing managers at the three managerial levels ( first level, middle level, and top level) who are working at the predetermined hospitals and available at time of data collection. The total numbers were (n=245) nursing managers classified as the following (n=140) from Main University Hospital, (n=32) from Pediatric Health Hospital, (n=16) from Women Health Hospital, (n=23) from Rajhi Liver Hospital and (n=34) from South Egypt Cancer Institute.

##### **Data collection tools:**

The data needed for the study was collected through self-administered questionnaire using the following two tools:

##### **First tool: Socio-demographic data questionnaire.**

This includes data about: age, gender, marital status, Educational qualification, job position, and years of experience.

##### **Second tool: General Decision Making Styles Questionnaire (GDMSQ)**

It was developed by Scott & Bruce (1995). It is aimed to assess decision-making styles of nurse managers. It consists of 25 items

into five decisional styles, namely: rational (5 items) for instance (I confirm twice my source of information before believing it); dependent (5 items) for instance (I often need help of other people while making decisions); avoidant (5 items) for instance (I postpone my important decisions until there is pressure); intuitive (5 items) for instance (I rely upon my instincts while making a decision); and spontaneous (5 items) for instance (I generally make decisions instantly).

##### **Scoring system:**

The participant's responses to each statement were measured on a five point Likert scale ranging from (strongly disagree = 1 to strongly agree = 5). For each style of GDMS, the scores of the items were computed by adding the score on each of the 5 styles

items, resulting in values from 5 to 25. The score of each nurse manager was converted into a percentage score. If the percentage score was equal or more than 75%, it was considered as high style level, if the percentage score was from 60% to less than 75%, it was considered as moderate style level, and if the percentage score was less than 60%, it was deliberated as low style level (Scott & Bruce, 1995).

##### **Validity and reliability:**

After reviewing the available literature concerning the topic of the study, The researchers translated the tools from English to Arabic. This phase took about six months from August 2019 to February 2020 and the face validity of the assessment tool reviewed by the experts of the nursing administration (Jury from three professors and two assistant professors in the specialty) to check the relevance, coverage, and clarity of the questions. Accordingly, modifications were done and the final form was developed.

##### **Pilot study:**

A pilot study was carried out on (10%) from total sample of studied nursing managers (n=25) from the Assiut University Hospitals to assess tool clarity, understandability, and applicability and time estimate of the study tools. Moreover, to identify problems that may be encountered during the actual data collection. Data collected from the pilot study was analyzed and no changes were done for the study tools, so the nursing managers included in the pilot study did not excluded from the study. The study tools were tested for its reliability by using Crombach's Alpha Coefficient test, it was ( $\alpha=0.724$ ) for General Decision Making Styles scale, Thus indicated high reliability of study tool.

##### **Ethical considerations:**

Study proposal take approval from Ethics Committee in the Faculty of Nursing-Assiut University. An official permission to conduct the study was obtained from hospital authorities. Prior to the initial data collection, explanation of the aims and the nature of the study were performed by the researcher to all nursing managers included in the study. Also oral agreement was taken from each participant before participation in the study. The researcher emphasized that the participation is absolutely confidential as of the subjects' privacy is absolutely assured through the entire study.

##### **Field work (data collection):**

The researcher was met with all participants in different shifts according to their schedules. Then the researcher explains the purpose of the study and ask them their participation. After obtaining oral consent, the study tools were given to them to fill. About twenty minutes was taken to fulfill the questionnaires. The whole duration for data collection took about two months from March to April 2021.

**Statistical analyses:**

Data entry and statistically analysis were done using SPSS 20.0 Statistical Soft Ware Package. Data were presented using descriptive statistics in the form of frequencies, percentages, mean, standard deviation, range, chi-square, and Anova. Statistical significance was considered at P-value  $\leq 0.05$ .

**Result****Table (1): Socio demographic data of nursing managers at the selected hospitals (N=245).**

Socio-demographic items	South Egypt Cancer Institute (n=34)		Pediatric Health Hospital (n=32)		Women Health Hospital (n=16)		Rajhi Liver Hospital (n=23)		Main University Hospital (n=140)		Total (n=245)	
	No	%	No	%	No	%	No	%	No	%	No	%
<b>Age group</b>												
Less than 30 years	21	61.8	15	46.9	4	25.0	9	39.1	54	38.6	103	42.0
From 30- 40 years	10	29.4	9	28.1	9	56.3	13	56.5	74	52.9	115	46.9
More than 40 years	3	8.8	8	25.0	3	18.8	1	4.3	12	8.6	27	11.0
<b>Gender</b>												
Male	2	5.9	0	0.0	0	0.0	2	8.7	2	1.4	6	2.4
Female	32	94.1	32	100.0	16	100.0	21	91.3	138	98.6	239	97.6
<b>Marital Status</b>												
Single	6	17.6	8	25.0	2	12.5	4	17.4	16	11.4	36	14.7
Married	28	82.4	23	71.9	14	87.5	19	82.6	122	87.1	206	84.1
Widow	0	0.0	1	3.1	0	0.0	0	0.0	2	1.4	3	1.2
<b>education Level</b>												
Nursing Bachelor	30	88.2	29	90.6	12	75.0	20	87.0	128	91.4	219	89.4
Post graduate	4	11.8	3	9.4	4	25.0	3	13.0	9	6.4	23	9.4
Nursing diploma	0	0.0	0	0.0	0	0.0	0	0.0	3	2.1	3	1.2
<b>Managerial levels</b>												
Top management	2	5.9	4	12.5	4	25.0	3	13.0	4	2.9	17	6.9
Middle Level	12	35.3	13	40.6	7	43.8	11	47.8	81	57.9	124	50.6
First Level	20	58.8	15	46.9	5	31.3	9	39.1	55	39.3	104	42.4
<b>Experience year</b>												
Less than 5 year	17	50.0	9	28.1	2	12.5	3	13.0	17	12.1	48	19.6
From 5-10 year	7	20.6	8	25.0	5	31.3	10	43.5	60	42.9	90	36.7
More than 10 year	10	29.4	15	46.9	9	56.3	10	43.5	63	45.0	107	43.7

**Table (2): Mean and standard deviations of decision making styles of the studied nursing managers at the selected hospitals (N=245).**

Decision Making styles	South Egypt Cancer Institute (n=34)	Pediatric Health Hospital (n=32)	Women Health Hospital (n=16)	Rajhi Liver Hospital (n=23)	Main University Hospital (n=140)	Total (n=245)	P- Value
	Mean $\pm$ SD	Mean $\pm$ SD	Mean $\pm$ SD	Mean $\pm$ SD	Mean $\pm$ SD	Mean $\pm$ SD	
<b>Rational</b>	20.97 $\pm$ 2.26	20.94 $\pm$ 1.81	20.31 $\pm$ 1.82	21.78 $\pm$ 1.68	20.88 $\pm$ 2.08	<b>20.95<math>\pm</math>2.03 (83.8)</b>	0.229
<b>Dependent</b>	17.47 $\pm$ 2.58	16.63 $\pm$ 3.11	17.13 $\pm$ 3.1	16.17 $\pm$ 2.84	17.11 $\pm$ 2.73	17.01 $\pm$ 2.8 (68.0)	0.436
<b>Intuitive</b>	<b>18.12<math>\pm</math>2.57</b>	16.34 $\pm$ 2.16	16.63 $\pm$ 2.19	14.13 $\pm$ 2.67	16.59 $\pm$ 2.88	16.54 $\pm$ 2.84 (66.1)	<b>&lt;0.001**</b>
<b>Spontaneous</b>	<b>15.32<math>\pm</math>3.3</b>	13.63 $\pm$ 2.83	15.25 $\pm$ 2.72	12.57 $\pm$ 2.84	14.26 $\pm$ 3.06	14.23 $\pm$ 3.09 (56.9)	<b>0.007**</b>
<b>Avoidant</b>	13.18 $\pm$ 3.23	12.88 $\pm$ 2.78	13.31 $\pm$ 2.65	11.48 $\pm$ 2.43	12.84 $\pm$ 2.88	12.8 $\pm$ 2.88 (51.2)	0.200

- ( Mean  $\pm$  SD ) Mean and standard deviation.

- \*Significant level at P value  $\leq$  0.05,

\*\*Significant level at P value  $\leq$  0.01.

**Table (3): Decision-making styles (DMS) among the nursing managers in according to their managerial levels (N=245).**

Managerial levels	N	Decision Making Styles				
		Rational	Intuitive	Avoidant	Dependent	Spontaneous
		Mean $\pm$ SD	Mean $\pm$ SD	Mean $\pm$ SD	Mean $\pm$ SD	Mean $\pm$ SD
<b>Top Management</b>	<b>17</b>	<b>22<math>\pm</math>1.66</b>	<b>15.71<math>\pm</math>2.11</b>	<b>11.76<math>\pm</math>2.11</b>	<b>17.29<math>\pm</math>2.95</b>	<b>12.76<math>\pm</math>3.51</b>
<b>Middle Level</b>	<b>124</b>	<b>20.9<math>\pm</math>1.95</b>	<b>16.47<math>\pm</math>2.94</b>	<b>12.89<math>\pm</math>2.79</b>	<b>16.85<math>\pm</math>2.83</b>	<b>14.44<math>\pm</math>3.07</b>
<b>First Level</b>	<b>104</b>	<b>20.84<math>\pm</math>2.14</b>	<b>16.76<math>\pm</math>2.81</b>	<b>12.86<math>\pm</math>3.08</b>	<b>17.15<math>\pm</math>2.75</b>	<b>14.22<math>\pm</math>3.01</b>
<b>P. value</b>		<b>0.083</b>	<b>0.339</b>	<b>0.310</b>	<b>0.662</b>	<b>0.112</b>

- ( Mean  $\pm$  SD ) Mean and standard deviation

- \*Significant level at P value  $\leq$  0.05,

\*\*Significant level at P value  $\leq$  0.01

**Table (4): Relationship between decision making styles among nursing managers and socio demographic data (N=245).**

Socio demographic data	N	Decision Making Styles				
		Rational	Intuitive	Avoidant	Dependent	Spontaneous
		Mean $\pm$ SD	Mean $\pm$ SD	Mean $\pm$ SD	Mean $\pm$ SD	Mean $\pm$ SD
<b>Age group</b>						
Less than 30 years	103	20.93 $\pm$ 2.13	16.83 $\pm$ 2.75	12.92 $\pm$ 3.08	17.28 $\pm$ 2.74	14.31 $\pm$ 3.03
From 30- 40 years	115	20.8 $\pm$ 1.96	16.32 $\pm$ 3.02	12.85 $\pm$ 2.81	16.67 $\pm$ 2.85	14.28 $\pm$ 3.14
More than 40 years	27	21.63 $\pm$ 1.84	16.37 $\pm$ 2.31	12.07 $\pm$ 2.27	17.44 $\pm$ 2.74	13.7 $\pm$ 3.18
<b>P. value</b>		<b>0.160</b>	<b>0.405</b>	<b>0.381</b>	<b>0.190</b>	<b>0.645</b>
<b>Gender</b>						
Male	6	21.83 $\pm$ 2.4	16.67 $\pm$ 4.37	11.67 $\pm$ 2.34	15.67 $\pm$ 3.98	13.5 $\pm$ 2.74
Female	239	20.92 $\pm$ 2.02	16.54 $\pm$ 2.8	12.82 $\pm$ 2.89	17.05 $\pm$ 2.76	14.25 $\pm$ 3.1
<b>P. value</b>		<b>0.279</b>	<b>0.911</b>	<b>0.332</b>	<b>0.234</b>	<b>0.560</b>
<b>Marital Status</b>						
Single	36	20.72 $\pm$ 2.11	16.69 $\pm$ 2.69	12.78 $\pm$ 2.71	17.47 $\pm$ 1.98	14.25 $\pm$ 2.74
Married	206	21 $\pm$ 2.03	16.5 $\pm$ 2.86	12.79 $\pm$ 2.92	16.93 $\pm$ 2.92	14.22 $\pm$ 3.16
Widow	3	20.33 $\pm$ 0.58	17.33 $\pm$ 3.79	13.33 $\pm$ 3.21	17 $\pm$ 2.65	14.67 $\pm$ 3.21
<b>P. value</b>		<b>0.661</b>	<b>0.827</b>	<b>0.949</b>	<b>0.567</b>	<b>0.969</b>
<b>Education Level</b>						
Nursing Bachelor	219	20.92 $\pm$ 2.08	16.55 $\pm$ 2.88	12.79 $\pm$ 2.97	16.96 $\pm$ 2.81	14.26 $\pm$ 3.13
Post graduate	23	21.35 $\pm$ 1.58	16.26 $\pm$ 2.22	12.91 $\pm$ 1.9	17.39 $\pm$ 2.74	13.83 $\pm$ 2.66
Nursing diploma	3	20 $\pm$ 1	18 $\pm$ 4.36	12 $\pm$ 2.65	18 $\pm$ 2.65	14.67 $\pm$ 4.04
<b>P. value</b>		<b>0.452</b>	<b>0.603</b>	<b>0.876</b>	<b>0.647</b>	<b>0.788</b>

Socio demographic data	N	Decision Making Styles				
		Rational	Intuitive	Avoidant	Dependent	Spontaneous
		Mean $\pm$ SD	Mean $\pm$ SD	Mean $\pm$ SD	Mean $\pm$ SD	Mean $\pm$ SD
<b>Experience year</b>						
Less than 5 year	48	20.73 $\pm$ 2.09	17.4 $\pm$ 2.64	13.13 $\pm$ 3.32	17.65 $\pm$ 2.29	14.67 $\pm$ 3.2
From 5-10 year	90	20.96 $\pm$ 2.1	16.3 $\pm$ 2.93	12.78 $\pm$ 2.8	16.87 $\pm$ 3.04	14.01 $\pm$ 2.82
More than 10 year	107	21.04 $\pm$ 1.95	16.36 $\pm$ 2.8	12.66 $\pm$ 2.75	16.85 $\pm$ 2.77	14.21 $\pm$ 3.26
<b>P. value</b>		<b>0.683</b>	<b>0.065</b>	<b>0.653</b>	<b>0.217</b>	<b>0.495</b>

- (Mean  $\pm$  SD )Mean and stander deviation

- \*Significant level at P value  $\leq$  0.05,

\*\*Significant level at P value  $\leq$  0.01

**Table (1): Socio demographic data for studied nursing managers at the selected hospitals (N=245).** Regarding to age, about more than two fifth (46.9 %) of nursing managers were aged 30- 40 years old. The highest percentage of age group was related to pediatric health hospital and south Egypt cancer institute (46.9%, and 61.8%) less than 30 years respectively. While more than half percent of nursing managers at the main university hospital, women health hospital, and Rajhi liver hospital (52.9%, 56.3%, and 56.5%) respectively, were aged from 30 to 40 years. Regarding to gender, the majority (97.6%) of them were female, most of them (84.1%) were married. As for their educational level, the majority of them (89.4%) had bachelor of nursing. Regarding to the managerial level, it was observed that the highest percentage of nursing managers at the pediatric health hospital and south Egypt cancer institute (46.9%, and 58.8%) respectively, occupied the first levels of management. While the highest percentage of nursing managers at women health hospital, Rajhi liver hospital, and main university hospital (43.8%, 47.8%, and 57.9%) respectively, occupied the middle level of management.

Regarding to the years of experience, it was observed that about half percent of nursing managers at the south Egypt cancer institute (50%) have experienced less than five years. While the highest percentage of nursing managers at Rajhi liver hospital, main university hospital, pediatric health hospital, and women health hospital, (43.5%, 45%, 46.9%, and 56.3%) respectively, have experience more than 10 years.

**Table (2): Mean and standard deviations of decision making styles of the studied nursing managers at the selected hospitals (N=245).** This table indicated the mean and standard deviations of decision making styles of the studied nursing managers at selected hospitals. It is observed that rational decision making style has had the highest mean score (20.95 $\pm$ 2.03, 83.8%) in all selected hospitals. While the high mean score was for Rajhi liver hospital regarding rational decision making style (21.78 $\pm$ 1.68). There were highly statistically significant differences between different selected

hospitals regarding to intuitive and spontaneous decision making style ( $<0.001^{**}$ ,  $0.007^{**}$ ) respectively. With the highest mean scores for the both styles related to south Egypt cancer institute (18.12 $\pm$ 2.57, 15.32 $\pm$ 3.3) respectively.

**Table (3) The different decision-making styles of studied nursing managers according to the managerial levels(N=245).** As the table indicated, The most dominant decision making style among managerial levels was rational style. Also, from another perspective. Rational and dependent decision making styles has the highest mean score (22 $\pm$ 1.66, 17.29 $\pm$ 2.95) in top level management respectively. Regarding to the remaining styles: avoidant and spontaneous decision making styles have the highest mean score (12.89 $\pm$ 2.79, 14.44 $\pm$ 3.07) in middle management level respectively. And the Intuitive decision making styles has the highest mean score(16.76 $\pm$ 2.81) in the first management level.

**Table (4): The relationship between decision making styles and the socio demographic data of studied nursing managers (N=245).** As the table indicated, there are no statistical significant differences between decision making styles and different items of socio demographic data at p value( $P \geq 0.05$ ).

### Discussion:

Nowadays, a lot of professionals and scholars believe that the most essential function of management is the duty of decision making (Mohamed & Elrais, 2017). Decision making is a fundamental, multifaceted and vital component of the work of managers, the styles of decision making are divergent in their nature, efficiency, and results. The present study aims to determine decision making styles among nursing managers at Assiut university hospitals and south Egypt cancer institute.

From the result of this study, the majority of nursing managers were married (84.1%), table (1). These findings were in similarity with Mohamed & Elrais, (2017), who revealed in their study on nurse managers in Port Said at Egypt that (88.2%) of them were married.

As regarding to sex, the majority of them were female (97.6%). These finding was contradicted with **Al Shehri , et al., (2013)** who found that more than 70% of health managers in their study were male.

It was also found that most of the nursing managers at the south Egypt cancer institute and pediatric health hospital are recent graduates, as their ages are less than 30 years and therefore, occupy the first levels in management, and their years of experience are less than five years, except the pediatric Health Hospital. About two-fifths of them have more than 10 years of experience, table (1). This result is in disagreement with **Saleh, et al., (2013)**, who revealed in their study on nurses leaders in Assiut University Hospital that more than half were aged >30 years. And **Ebrahim., (2017)** revealed in their study on nursing management staff at Benha university hospital that more than two-fifth were aged 45- < 50 years old.

As for women health hospital, Rajhi liver hospital, and main university hospital, the majority of nursing managers occupy the middle levels of management with ages ranging from 30 to 40 years and years of experience exceeding 15 years, table (1). These findings were in similarity with **Lamba & Ozdasli, (2015)**, who revealed in their study on managers who work in public and private sectors in Burdur at a Turkey that more than 79 percent of them had graduated from college or university. Besides, 85 percent of the managers were middle-level managers. This explains the differences between the studied hospitals.

The results of the current study reveal that there were highly statistical significant differences related to intuitive and spontaneous styles in all hospitals in general which both styles had got a high mean score in the south Egypt cancer institute. This might be due to that most nurse managers who participated in the study were head nurses with nursing bachelor (89.4%) occupy the middle levels of management (50.6%) with years of experience exceeding 15 years, table (1).

This were consistent with the finding of **Abubaker et al, (2019)** who claimed that instinct or intuition and spontinuity is more proper for the directors positionally topped in the association who have a high educational level and wide experience in their areas of expertise. Additionally **Shahinia & Ranjbarb, (2019)** demonstrated that decision makers rely on inner feelings and efforts to make a quick decision in the shortest possible time of seemingly complex situation.

Regarding to managerial levels. It was observed that rational decision making style had the highest mean score in the three managerial levels and followed by the dependent decision making style, table (3). This result was confirmed by data in table (2), which the

rational decision making style was the main dominant style in different selected hospitals, which the highest mean score related to the Rajhi liver hospital. Rational decision making is based on the thoughtful analysis and assessment of alternatives to reach an ideal goal through the most effective means. This result may be due to the use of the electronic health record system in Al-Rajhi Hospital. In this respect **Ahmed et al, (2020)** mentioned many advantages of EHR describe them as follows; fewer errors, and faster care and decision making process.

A possible explanation for using the rational styles as dominant style could be due to that most nursing manager who participated in this study had a high educational level. In this respect, **Al Shra'ah, (2015)** stated that proficiency and learning procedure impact the style of making decisions for any director or in any association. Additionally, **Harteis & Gruber, (2008)** **Galway & Sheppard, (2015)** assured that the inherent style of decision making depends on education, expertise and learning, and natural reaction. On the other hand, this result is inconsistent with Slosky, Stern, **Burke, & Siminoff, (2014)**, reported that the significant involvement in taking decisions was not correlated with the higher academic qualification.

The previous studies of **Riaz, (2015)** & **El Othman et al, (2020)** were confirmed this results, which proposed that the rational decision making style is the perfect style of decision making. Also **Lamba & Ozdasli, (2015)**; **Riaz & Anis-Ul-Haque, (2012)** in the same line with this result, which noted that the directors in administration are the most ones implementing the rational style when making decisions. Consequently, it is normal that professional directors are more rational when taking their decisions, and this decreases the harm that may happen because of unrestricted and intuitive decision making.

This result was inconsistent with **Mohamed & Elrais, (2017)**, who explained in their study on managers on Port Said hospitals in Egypt that most nurse managers had low rational, low intuitive, low dependent, and moderate spontaneous decision-making styles. Meanwhile, they had a high avoidant style.

Was observed that the dependent style has a high mean score in the top management level, followed by the first level and the middle level (table 3).

From these results, we conclude that and higher reported use of the rational style followed by the dependent style which is similar to the findings of previous several studies of **Lamba & Ozdasli (2015)**; **Mohamed & Elrais, (2017)**, which stated that a higher detailed application of the rational style matched forcefully with the dependent. A possible

explanation of this result could be that exertion to pursue advice from other people is a part of a rational process. These results are inconsistent with **Bavolar & Orosova (2015)**, who stated that both the intuitive and rational styles of decision making are non-dependent.

This highlights, that individuals have a dominant style even if tend to use more than one decision-making style. As indicated by **Riaz, (2015)**, Managers use primary, secondary, and least favored decision making styles through three decision making situations. A possible explanation could be that in situations where it is necessary to decide, they want to do it as soon as possible. Only a few people bound themselves to a single style of decision making. Most people use two or three decision making styles.

Study results it was found no statistically significant differences relation between all decision making styles and socio-demographic data for the studied nursing managers table (4). This finding was consistent with **Mohammed et al, (2013)** who found that, there were no statistical significant differences regarding to decision making styles and gender, while disagreed with the present study result regards to age, years of experience, and level of education as he found that, there was statistical significant differences relation between age, years of experience, and level of education and decision making styles.

### Conclusion:

#### Regarding to the study results, the consequential conclusions can be stated:

Rational decision making style was the most dominant style in different studied hospitals and in the three managerial levels. Also, the majority of the studied nursing managers perceived rational decision making style at the high mean score, and followed by the dependent decision making style, and they perceived avoidant decision making style at low level. Rational and dependent decision making styles have the highest mean score in top level management respectively. Avoidant and spontaneous decision making styles have the highest mean score in middle management level respectively. And the Intuitive decision making style has the highest mean score in the first management level. Moreover, study results found that no statistically significant differences relation between all decision making styles and different items of socio-demographic data for the studied nursing managers

### Recommendation:

#### According to the study results the following recommendations are advised:

- Training program about decision making styles must be provided for the novice head nurse so that

the nurse managers can learn and practice appropriate decision making style.

- To enhance their experience, the middle and first position must be engaged in the process of taking decisions.
- Continual checking and assessment must be conducted to nurse managers' styles of taking decisions and the quality of the decisions they take.
- Reapplication of the study on a more wide-ranging sample that included nurse managers working in a bigger range of health institutions could render the thematic nature of our findings, and therefore the composition of the model, more strong.
- Comparative studies need to be performed on the nursing managers of public, private and non-governmental organizations to determine the most dominant styles of decision making in different organization.

### Reference

- **Abood, S., & Thabet, M., (2017):** Impact of Leadership Styles on Decision Making Styles among Nurses' Managerial Levels, Journal of Nursing and Health Science, Vol. 6, No. (5), PP 71-78.
- **Abubakar, M., Hamzah, E., Maher, A. & Alatailat, Alev E., (2019):** Knowledge management, decision-making style and organizational Performance. Journal of Innovation & Knowledge. Vol. 4, Pp: 104-114.
- **Ahmed, A., Abd Elazez, E., & Mohamed, N., (2020):** Nurse's Knowledge, Skills, and Attitude toward Electronic Health Records IOSR Journal of Nursing and Health Science. Volume 9, Issue 5 Ser. II , PP 53-60.
- **Al Shehri, O., Al-Harathi, A., & Al-Khatib, J., (2013 ):** Patterns of Creativity Trends among Health Managers in Health Sector of Saudi Arabia, Riyadh Region, European Scientific Journal, Vol. (9), No. (6), Pp: 111-128.
- **Al Shra'ah, A., (2015):** The Impact of Decision Making Styles on Organizational Learning: An Empirical Study on the Public Manufacturing Companies in Jordan. International Journal of Business and Social Science Vol. 6, No. 4, Pp 55-56.
- **Alacreu-Crespo, A., Fuentes, M., Abad-Tortosa, D., Cano-Lopez, I., González, E., & Serrano, M., (2019):** Spanish validation of General Decision-Making Style scale: Sex invariance, sex differences and relationships with personality and coping styles. Judgment and Decision Making, Vol. 14, No. 6, November 2019, pp. 739-751
- **Bavol'ár J., & Orosová O., (2015):** Decision-making styles and their associations with decision-making competencies and mental health. Judgment

- and Decision Making, Vol. (10), No. (1), pp. 115–122.
- **Bavolar, J., & Bačíková-Slešková, M., (2018):** Do decision-making styles help explain health-risk behavior among university students in addition to personality factors? *Studia Psychologica*, Vol. 60, No. (2), Pp. 71–83
  - **Berisha, G., Pula, J., & Krasniqi, B., (2018):** Convergent validity of two decision making style measures. *Journal of Dynamic Decision Making*, 4, 1.
  - **Chisengantambu-Winters C., (2020):** Developing a decision-making dependency (DMD) model for nurse managers. *Heliyon*, 6, e03128.
  - **Delaney, R., JoNell, S., Andrew, M. P., & Wandi, B. de Bruin, (2015):** Variations in Decision-Making Profiles by Age and Gender: A Cluster-Analytic Approach. Vol. 1; No. 85: Pp: 19–24.
  - **Driver, M., (1979):** Individual decision making and creativity. In S. Kerr, (Ed.), *Organizational behavior*. Columbus, OH: Grid Publishing.
  - **Driver, M. J., Brousseau, P. L., & Hunsaker, P. L., (1993):** *The dynamic decision maker*. San Francisco: Jossey Bass Publications.
  - **Ebraheem, S. & Araby, M. (2017):** Enhancing Creativity and Change of Nursing Management Staff and Its Influencing on Their Performance at Benha University Hospital.
  - **El Othman Radwan, El Othman Rola, Hallit Rabih, Obeid Sahar, Hallit Souheil, (2020):** Personality traits, emotional intelligence and decision making styles in Lebanese universities medical students. pp 8-46.
  - **Galway, G., & Sheppard, B., (2015).** Research and evidence in education decision-making: A comparison of results from two pan-Canadian studies. *Education Policy Analysis Archives*, Vol. 23, No.(109).
  - **García, A. G., Pinto-Carral A., Villorejo, J. S. and Marqués-Sánchez P., (2020):** Nurse Manager Core Competencies: A Proposal in the Spanish Health System, *Int J Environ Res Public Health*, Vol. (17), No. (9), Pp. 2-15.
  - **Harren, V. A., (1979):** A model of career decision making for college students. *Journal of Vocational Behavior*, 14, 119–33.
  - **Harteis C, & Gruber H., (2008):** Intuition and professional competence: intuitive versus rational forecasting of the stock market. *Vocations and Learning*. Vol. (1), No. (1), Pp : 71-85.
  - **Kozhevnikov M., Evans C., & Kosslyn S., (2014):** Cognitive Style as Environmentally Sensitive Individual Differences in Cognition: A Modern Synthesis and Applications in Education, Business and Management. *Psychological Science in the Public Interest*, Vol. 15, No. (1), Pp:3-33
  - **Lamba M. & Ozdasli K., (2015):** Influence of Social Culture on Decision-Making Mannerin Turkey: An Analysis with the Structural Equation Model: Vol. (19), No. (2), Pp. 341-353.
  - **Mohamed, H., & Elrais, H., (2017):** Factors Affecting Decision Making among Nurse Managers and Its Relation to Decision Making Styles. Vol. (4), No. (2), Pp. 252-259.
  - **Mohammed, A., Nassar, M., Ghallab , S., & Morsy, S., (2013):** Nurse Managers Decision Making styles and It's Effect on Staff Nurses' Satisfaction. Vol , (1). No , (2). Pp: 23.
  - **Philips, S., Paziienza, N., & Farrin, H., (1984):** Decision making styles and problem solving appraisal. *Journal of Counseling Psychology*, 31, 497–502.
  - **Rayner, S., & Riding, R., (1997):** Towards a categorization of cognitive styles and learning styles, *Educational Psychology*, 17, 5–27.
  - **Riaz, M., & Anis-Ul-Haque, M., (2012):** Leadership styles as predictors of decision-making styles. *African Journal of Business Management*. Vol. 6, No. 15, P.p 5226-5233.
  - **Riaz, M., (2015):** Leadership Styles As Predictors Of Decision Making Styles: Moderating Role Of Decision Related Factors. Department of Psychology, Faculty of Social Sciences, International Islamic University Islamabad.
  - **Saleh, N. Ali, Al-Sayed N, Ghallab S, & Abd Alaa S., (2013) :** Nurse leaders' behaviors, and its effect on Nurses creativity at Main Assiut University Hospital. *J Am Sci* 2013; Vol. (9), No. (12): Pp. 906-912.
  - **Scott, S., & Bruce, R. (1995):** Decision-making style: The development and assessment of a new measure, *Educational and Psychological Measurement*, Vol. (55), No. (5), Pp. 818-831.
  - **Shahinia, Kh., & Ranjbar, M., (2019):** Identifying Decision-Making Styles and Components of Succession Planning and Examining their Relationship. Vol. (3), No. (4).
  - **Slosky, L., Stern, M., Burke, N., & Siminoff L., (2014):** Decision making in the PICU: An examination of factors influencing participation decisions in phase III randomized clinical trials. *International Journal of Pediatrics*. Pp. 1-6.
  - **Weiss, S.A., Tappen, R.M., & Grimley, K., (2019):** *Essentials of Nursing Leadership and Management*, seventh ed. FA Davis, Philadelphia.