

**Quality of Nursing Care at National Center for Diabetes Endocrinology and Genetics: Patients Satisfaction**Nisser Mohammad Hroub<sup>1</sup>, Sara Lavinia Brair<sup>2</sup><sup>1</sup>Al Neelain University Faculty of Nursing Sciences, Department of Community health Nursing.<sup>2</sup>Al Neelain University, Faculty of Medicine and Health Sciences, MBBS, MD Community Medicine, IFME fellow.

\*Corresponding author: nisserjo@yahoo.com

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**Keywords:**Quality of Nursing,  
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**Abstract:** Patients satisfaction is used as an important indicator of quality care and is frequently included in healthcare planning and evaluation. "The aims of this study is to" To study patients' satisfaction regarding the quality of nursing care of the center , identify the main dimensions of patients' satisfaction regarding quality of nursing care. And determine the association between sociodemographic variables and patients' satisfaction regarding quality of the nursing care. The study was conducted during the period from 1<sup>st</sup> December 2013 to 1<sup>st</sup> maye 2014. The design of this study is Descriptive cross-sectional facility based study. The study sample was 305 patients who were selected randomly. All of them actually participated in the study and completed face to face interviewed questionnaire prepared according to Likert scale and data was analyzed by SPSS. The results showed that participants were moderately satisfied with the quality of nursing care in National Center for Diabetes Endocrinology and Genetics ,by used different dimensions, The total satisfaction mean was (3.22), with higher satisfaction levels in the physical environment of the center (M = 3.85) than technical quality (M =3.20). Patients from both settings were less satisfied with the responsiveness and convenience (M = 2.88). Age, sex, marital status, level of education, income and the diagnosis show statistically significant effects on patients' level of satisfaction. On the other hand duration of diabetes and current occupation did not show statistically significant effects on patients' level of satisfaction. In conclusion, the present study concluded that reforming community health nursing care policies to place more attention on increasing the level of enhance of responsiveness skills of nursing to patients communication and the interpersonal aspects of the provided care could probably increase their satisfaction. Lack of experience and professional skills of nursing care staff, in addition to overload work and the huge number of diabetic patients, increase the need for intensive training for nurses, and the involvement of the patient in treatment plan.

**INTRODUCTION**

Patient satisfaction is the patient's perception of care received compared with the care expected (Aiello et al 2003). During hospitalization, patient satisfaction represents a balance between the patient's perception and expectation of their nursing care (Han, 2003).

Patient's satisfaction receives an increasing focus in research studies, mainly because the health care sector is considered as a competitive sector where consumers' satisfaction is very important. (Graham J,2005., Hills R,2007., Laos CM et al.,2012) Satisfaction level regarding the quality of nursing care has a substantial influence on the satisfaction level with the whole health care setting because nurses are the health care professionals clients deal with more often than others.

(Johansson P., 2002 ,Merkouris A.,2004 Laschinger HS,2005., Wagner D, 2009, Agosta LJ, 2010).

Patient satisfaction is the result of an evaluative cognitive reaction along with the associated feelings toward the actual care received and the expected care. (Laos CM et al., 2012., Johansson P, 2002 ,Laschinger HS,2005 ,Wagner D, 2009., Agosta LJ, 2010., Lee DS, Tu JV, Chong A, Alter DA,2008).In addition to this cognitive evaluation, demographic variables such as gender, perceived health status, age, and educational level could also affect client satisfaction level, with male, healthier, older, and lower educated clients being more satisfied( Johansson P, 2002., Lee DS, 2008., Hekkert KD,2009., Säilä T, et al.,2008., Kuosmanen L et al.,2006 Hiidenhovi H, 2002).Nonetheless, patients satisfaction has been reported as being positively associated with the quality of care. (Johansson P, 2002., Leonard KL, 2008 ,Bryant R., 2002) In fact,

client satisfaction is considered one of the most important indicators of the quality of nursing care. (Johansson P, 2002., Coban sikci M. 2010) By measuring patient satisfaction, health care services retrieve vital information. Which can be used to improve the quality of nursing care. Laschinger .(2005)Consequently, higher levels of patient satisfaction will be reached which, in turn, will help patents adhere to their treatment, return to the health care setting, and recommend it to others. (Hills R,2007., Johansson P, 2002., Land LM,2012).

Health care services in Jordan are operated by: The Ministry of Health (governmental hospitals and governmental Community Health Centers (CHCs)); the private sector (private hospitals and private clinics); Royal Medical Services (military hospitals); Universities (teaching hospitals); and International and charitable organizations (health centers that include United Nations Relief and Works Agency (UNRWA) CHCs).

In the current study female, lower educated clients had higher levels of satisfaction. Two studies of patient satisfaction with nursing care among a Jordanian population also reported that females had higher levels of satisfaction than males(Levoy B, 2012., Alasad J, 2003) .On the other hand, studies conducted among other populations reported that males were more satisfied than females.(Alhusban MA, 2009., Säilä T et al., 2008)

However, the effect of educational level in this study was consistent with studies conducted among a Jordanian population and other populations. (Hekkert KD,2009., Alasad J, 2003., Alhusban MA, 2009).This suggested that the effect of gender seemed to change in different population, while the effect of education seemed to be more universal.

This study **aimed** to:

- 1- Study patients' satisfaction regarding quality of nursing care of center.
2. Identify the main dimensions of patients' satisfaction regarding quality of nursing care.
3. Determine the association between sociodemographic variables and patients' satisfaction regarding quality of the nursing.

## Methodology

### Study design

Descriptive cross-sectional facility based study.

### Study area

The National Center for Diabetes, Endocrinology and Genetics is an independent non-profit organization. The main goal of NCDEG is providing quality health care, education and training in the fields of diabetes,

endocrinology and genetics, in- Amman capital of Jordan.

### Study population

Diabetic patients registered in the center from the all Jordan region.

Exclusion Newly registered patients less than 5 months follow up and, Diabetic children.

### Sample size determination

A total of study population are 50000 patients registered at center for diabetes ,according to sample size calculator, 311 patients calculated sample based on calculation at confidence level of 95%

$$n = \frac{n_1 + n_2}{1 + (d)^2} = \frac{50000 + 50000(0.02)^2}{1 + 0.0004} = \frac{50000}{1.0004} \approx 311$$

### Sampling technique

The study simple random sampling, a stander questionnaire with used, for data collection administer by for data collector, through interview.

### Data collection tool

#### The questionnaire consists of two parts:

**Part 1:** contain 17 items explore personal information of the patients, disease and service delivery related variables.

**Part 2:** contain 60 items that explore the patient's satisfaction with services provided to them, in 3 domains of satisfaction as:

- Physical environment.
- Responsiveness and convenience.
- Technical and quality.

The 60 items of 72 will develop and respondents are asked to respond a 5-point Likert-type scaleranging from "strongly agree" to "strongly disagree". 4 questions in the questionnaire are open-end questions in order to obtain qualitative data about the conceptions and patients satisfaction with the center services and those questions will focus on likes and dislikes of the services and suggestions to improve the nursing service.

### Data analysis

The collected questionnaires were firstly revised for the quality and completeness of data at the field level. Then a second check is done before data is entered into the computer database sheet. Data analysis was done using the SPSS, The satisfaction levels were calculated by adding responses. A higher means (M) indicated a higher satisfaction level. A mean equals or less than (M = 2.33) was considered as an indicative of "dissatisfaction", a mean range from (M = 2.34) to (M = 3.66) was considered as an indicative of a "moderate satisfaction", and a mean equals or higher than (M = 3.67) was considered as an indicative of a "high satisfaction".(Hroub N,Brair S,2015)

**Ethics consideration**

The study was approved by Al Neelain Institution Review Board (IRB). Consent form patients will be taken and participation is voluntary and patients have the right to withdraw at any time. The data were used only for scientific inquiry. An informed consent was obtained from all participants. Privacy of participants was respected and confidentiality was strictly adhered to. The study carries no foreseen harm to participants.

**RESULTS**

**Table (1):** summarizes distribution of important study variables such as age, sex, marital status, place of living, level of education, current occupation, and income, we notice that: more than half of the sample is male ,more than half of diabetic patients from the youth and middle age, also; 69.8 % was married, 42.3% from the middle region that high prevalence of study population. Level were illiterate, above half of study population not working, and high level of poverty.

**Table1. Personal data of study participants**

Variables	Frequency	Percentage
1-Gender:		
Male	166	54.4
Female	139	45.6
2- Age in years:		
o From 20 - 24	58	19
o From 25 - 34	68	22.3
o From 35 - 44	120	39.3
o Over 45	59	19.3
3- Marital status:		
o Single	45	14.8
o Married	213	69.8
o Divorced	24	7.9
o Widow	23	7.5
4- Place of living (Governorates):		
o South of Jordan	63	20.7
o North of Jordan	113	37
o Middle of Jordan	129	42.3
5- Level of education:		
o Illiterate	53	16.7
o Primary	86	17.4
o Peppering	55	18.0
o Secondary	51	19.7
o University or high	60	28.2
6- Current occupation:		
o Working	136	44.6
o Not working	169	55.4
7- Income (JD):		
o Below 500	137	44.9
o From 500-1500	95	31.1
o From 1501-2500	53	17.4
o Above 2500	20	6.6

**Table (2):** Table 2 represents the physical environment of the center. The total mean was (3.85), stander deviation was (0.761). The highest statement according

to mean is iteming No. (1)The mean equal (4.08) and the lowest statement according to mean No. (4) the mean equal(3.72).

**Table 2.Physical environment of the center**

Physical environment of the center				
No	Items	Mean	Standard deviation	Mean level
1	Center rooms are clean.	4.08	0.408	High
2	Bathrooms are enough for all.	3.92	0.718	High
3	There are adequate parking areas in the center.	3.95	0.597	High
4	Convenient and comfortable seats.	3.72	0.908	High
5	Lighting inside the center enough to work well.	3.89	0.804	High
6	Enough Signs to get around in the center.	3.89	0.789	High
7	There is order and system in the waiting area.	3.77	0.847	High
8	Drinking water available and clean disposable cups are available.	3.92	0.739	High
9	Center rooms have adequate ventilation.	3.59	1.042	Moderate
	<b>Total</b>	<b>3.85</b>	<b>0.761</b>	<b>High</b>

**Table (3):** as table 3 represents the technical quality of the center. The total mean was (3.20), stander deviation was (0.900). The highest statement according to mean

is item No. (12) The mean equal (4. 07), and the lowest statement according to mean No. (2) The mean equal (1.73).

**Table 3.Technical quality**

technical quality				
No	Items	Mean	Standard deviation	Mean level
1	I trust the nursing team.	3.99	0.612	High
2	Actively participate in preparation of the treatment plan.	2.23	1.099	Poor
3	I have some doubt in the ability of nursing team involved in my treatment.	1.73	1.077	Poor
4	Nursing team help me in choosing a therapeutic way.	2.36	1.126	Moderate
5	Nursing team take my complaint seriously.	3.99	0.608	High
6	I felt that my health has improved after I attended this center.	3.57	1.051	Moderate
7	Nursing team provide me with sufficient information about my health.	2.45	1.049	Moderate
8	Nursing team make sure my understanding of the treatment plan is clearly.	2.47	1.060	Moderate
9	Nursing team Show willing to help me all the time.	3.94	0.439	High
10	Nursing team respond to my requirements quickly.	3.89	0.553	High
11	I think the numbers of nursing staff are sufficient in the center.	3.04	1.157	Moderate
12	Nursing team is working to alleviate my anxiety and stress.	4.07	0.748	High
13	Nursing team provide me with the necessary privacy.	4.05	0.479	High
	<b>Total</b>	<b>3.20</b>	<b>0.900</b>	<b>Moderate</b>

**Table (4):** as table 4 represents the convenience and responsiveness on the center. the total mean was (2.88), stander deviation was (0.986). The highest statement according to mean is item No. (6) The mean

equal (4.04), and the lowest statement according to mean No. (1) The mean equal (2.40).

**Table (5)** which show that average mean for all fields' equal (3.31) and mean level of satisfaction was moderate.

**Table4. Convenience and responsiveness**

Convenience and responsiveness				
No	Items	Mean	Standard deviation	Mean level
1	I have to wait for a long time before issue of my file.	2.40	1.002	Moderate
2	I have to wait for a long time before to be seen by the nursing staff.	2.47	0.995	Moderate
3	I have to wait for a long time before receiving nursing service.	2.44	0.994	Moderate
4	I believe that nursing staff work as a team in the provision of the service.	2.90	1.099	Moderate
5	I cannot sit with nursing staff because of interruption from other people.	2.67	1.040	Moderate
6	I found that nursing team are good collaborators.	4.04	0.719	High
7	I believe that nursing team respect the time.	3.24	1.059	Moderate
	Total	2.88	0.986	Moderate

**Table 5.Level of patients' satisfaction-dissatisfaction with NCDEG center Amman.**

Dimensions	Mean	Standard deviation	Mean level
Physical environment of the center	3.85	0.761	High
technical quality	3.20	0.900	Moderate
Responsiveness and convenience	2.88	0.986	Moderate
Total	3.31	0.882	Moderate

**Table (6):** which show that, age, sex, marital status, level of education, income, the diagnosis show statistically significant difference on patients' level of

satisfaction. Duration of diabetes, current occupation did not show statistically significant difference on patients' level of satisfaction.

**Table6. Hypotheses results**

variables	T-Test	Sig value
sex	2.2	0.00
Current occupation	1.3	0.25
variables	ANOVA Test	Sig value
Age	0.71	0.01
Marital status	3.1	0.01
Place of living	3.5	0.04
Level of education	0.68	0.00
Income (JD)	9.2	0.04
Type of diabetes	3.1	0.01
Durationof diabetes	3.7	0.07

\* **At** ( $\alpha \leq 0.05$ )

**Table (7):** The researcher has collected answers about 35 of the patients participating in the Study on 4 open questions at the end of the questionnaire in order to obtain qualitative data about patient concepts and

satisfaction with NCDEG center nursing services, the questions focused on what they like and dislike and their vision and suggestions to improve these services.

**Table 7. Analysis of qualitative data:**

<b>Like-regarding attitudinal status.</b>	<b>Dislike-regarding attitudinal status.</b>	<b>Suggestions /Comments.</b>
1-Nursing team are good collaborators	1-Wait for a long time before to be seen by the nursing staff.	1-Providing psychosocial Programs.
2- Nursing team is working to alleviate my anxiety and stress.	2-Nursing team don't respond to the requirements quickly.	2- Activate home visits.
3-Nursing team respect the time		3- Medication Exchange all days.
		4- Transport patients to the centers or deliver
		Drugs to them.
<b>Like-regarding social status.</b>	<b>Dislike-regarding social status.</b>	
1-Nursing team contact my family when needed.	1-Lack of privacy.	5-Increase nursing knowledge about diabetic disease.
2- Nursing team are working to alleviate my anxiety and stress.	2-Difficulty of communicating with nursing team	
	3-Nursing health team don't visit me in house	

## DISCUSSION

Patients satisfaction is one of the most important determinants of the quality of nursing care. (Johansson P, 2002., Leonard KL, 2008., Coban sikci M, 2010) The current study revealed that patients were moderately satisfied which indicated providing a relatively acceptable nursing care quality. Patients reported higher levels of satisfaction in the physical environment of the center dimension more than in the other two dimensions (technical quality and Responsiveness and convenience dimensions). This finding implied that nurses' moderate technical skills in the selected NCDEG were unmatched either by their

interpersonal skills or by the level of coordinating the provided services. This finding was consistent with other satisfaction studies' findings, which reported that being more responsive to patients' needs and improving staff interaction with them would noticeably increase their satisfaction levels (Laos CM et al., 2012 LevoyB, 2012)

The similar demographic distribution of sample (NCDEG) suggested that the higher satisfaction levels in the NCDEG, physical environment dimension were mainly related to providing a higher quality of nursing care. A review of the health care policies in the NCDEG. Two major policy differences were

identified. Firstly, the NCDEG offered low-cost health care services.

This probably increased patient satisfaction levels in the NCDEG, since the affordability of services has a positive effect on patient satisfaction. Land LM. (2012), Secondly; the NCDEG not used a family health team (FHT) approach for the delivery of their health care services. The FHT approach is a method developed by the UNRWA medical services to deliver health care services to the whole family by a health care team that consisted of a doctor, one or more nurses, and a midwife Coban sikci M(2010). using such an approach could probably have increased their client satisfaction levels especially in the responsiveness and convenience dimension. In the current study female, lower educated clients had higher levels of satisfaction.

Two studies of patient satisfaction with nursing care among a Jordanian population also reported that females had higher levels of satisfaction than males.<sup>19</sup>

<sup>20</sup> On the other hand, studies conducted among other populations reported that males were more satisfied than females (Alasad J, 2003 ,Alhusban MA, 2009) However, the effect of educational level in this study was consistent with studies conducted among both a Jordanian population and other populations. (Hekkert KD,2009 Alasad J, 2003, Alhusban MA, 2009). This suggested that the effect of gender seemed to change in different population, while the effect of education seemed to be more universal. In relation to age, younger patients were more satisfied in this study. This finding contradicted the findings of the two Jordanian studies which reported that age did not affect patient satisfaction levels. (Alasad J, 2003. Alhusban MA, 2009)

Moreover; studies that were conducted in different populations reported that older clients were more satisfied than younger patients.(Johansson P, 2002 ,Hekkert KD,2009., Säilä T et al.,2008) In this current study, no effect of perceived health status on patient satisfaction level was reported. This contradicted with another satisfaction study's finding which reported that healthier clients tend to be more satisfied Hekkert KD(2009).this lack of consensus in Relation to age and perceived health status effects on patients' satisfaction levels suggested that these two variables were not as important as gender and educational level.

## CONCLUSION

The patients were moderately satisfied with the quality of nursing care delivered in the NCDEG. Policies in community health organizations should place more attention in coordinating their services especially by allowing their clients to be more actively involved in the planning of their own care. Also, staff development programs in community health organization should

focus on increasing the ability of nurses to communicate more effectively with patients. Less educated patients tend to have higher satisfaction levels and the effect of gender seems to differ among different populations. And lack of experience and professional skills in addition to work overload and the huge number of patients, however, they need intensive training and the involvement of the patient in treatment plan.

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