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Contents

Relationship between Occupational Stress and Organizational Commitment among Nurses in Port-Said City Hospitals

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Abstract

An analytical co-relational study, aiming at assessing occupational stress, organizational commitment and the relationship between both among nurses, was conducted at El-Amery and El-Mabara hospitals in Port Said City. The sample was composed of 186 nurses and nurse managers from both hospitals. Occupational Stress Scale and Organizational Commitment Instrument were used to collect the data. Results of the present study revealed that, more than half of nurses had high level of occupational stress (56.5%), the highest percentage of high levels of stressors as expressed by nurses were in relation to task, educational and vocational and physicians stressors (98.4%, 95.7% & 69.9% respectively). The majority of nurses (84.4) in both hospitals showed commitment. In relation to El-Amery hospital, a statistically significant negative correlation was found between task stressors and commitment items, while, in El-Mabara Hospital, a statistically significant positive correlation was found between physician stressors and commitment items. A statistically significant correlation was also found between both hospitals in relation to human and physical stressors and commitment items. There was a significant correlation between total stressors items and commitment items in El-Mabara Hospital, while totally no statistically significant relation was detected among occupational stress and commitment. Since occupational stress had a negative influence on nurses' productivity and moral, efforts should be done to decrease occupational stress as training nurses on time management. As well as assessment of nurses' educational needs and conduction in-service training programs to cover these needs and to decrease educational stressors were recommended.

Key Words: Work Stressors, Occupational Stressors, Organizational Commitment, Nurses Commitment

Introduction

In the current health care environment where constant change is the norm, some nurse managers may choose a less demanding position because they find the stress level too high in their current position **(Sullivan & Decker, 2005)**. **Yoder-wise (2003)** pointed to stress as neutral and referred to the positive and negative attributes of stress and distress, respectively. The experience of stress is subjective and individualized. One individual can experience an event positively, but this event could be overwhelming for someone else **(Sullivan & Decker, 2005)**. **Aamodt (2007)** mentioned that many events and factors could be considered stressors, adding that stressors could be grouped under two broad categories; personal and occupational. Personal sources of stress deal with non work issues as family and intimate relationships, marriage, divorce, health issue, financial problems and raising children. Occupational stress could be defined as the harmful physical and emotional responses that occur when

job's requirements could not match the worker's capabilities, resources, or needs. Occupational stress could lead to poor health and injury. It was also considered as the opposite of challenge, which usually energizes the worker psychologically and physically and motivates learning and job mastery (**Sauter et al., 1999).**

Occupational stressors could be grouped under two broad categories; job characteristics and organizational characteristics. Three main job characteristics causing stress were role conflict, role ambiguity and role overload **(Bolino & Turnely 2005).** The organizational rules and policies and supervisory according to **Atkinson, (2000)** and **Chang** and **Rosen, (2003)** were categorized under organizational stressors in the physical work environment. **Miller, Ruther** and **Koldinsky (2006)** mentioned noise, temperature and other sources of stress like minor frustration forecasting and residual stress. **Muse, Harris & Field (2003)** stated that organizational consequences of high levels of stress could reduce performance of many tasks and lead to burnout, absenteeism and turnover, and drug abuse. Some ethical issues of concern to nurses were related specifically to the nursing profession, others were related to bioethical issues confronting all society, and commitment was a form of these issues facing nurses. Nurses were committed to patients, colleagues, personal excellence, profession and organization **(Ellis & Hartley, 2008).**

Lee and **Henderson (1996)** mentioned that the characteristics of the current health care environment actually might increase occupational stress for the nurses to a level that could destroy organizational commitment. **Gurney, Muller** and **Price (1997)** defined organizational commitment as "the degree to which the person's loyalty is to the organization. According to **Meyer** and **Hersoviteh, (2001),** commitment consists of at least three factors; a strong belief in and acceptance of the goals and values inherited in the culture of the organization; a willingness to exert considerable effort on behalf of the organization; and a strong desire to maintain organizational membership. Thus, organizational commitment was more than a passive loyalty to an organization, it involved an active affiliation. In the health environment, where employee shortages were expected to increase beyond their current levels, maintaining a committed workforce was a strong advantage. Committed employees provided; asset value of stable, dedicated workforce; a lower employee recruiting, training and development costs; a retention of employees with knowledge, skills and abilities that were critical to organizational success; and an improved organizational image within the community; in addition, a committed workforce influences customer loyalty **(Jordan, 2004).**

Nurses are considered healers, they focus on activates related to caring in the diagnosis and treatment of human response to health and illness phenomena. However, inherent in this caring occupation are numerous sources of stress that become occupational hazards for nurses. Commitment is very important in nursing career. The more the nurses are committed with their organization, the less occupational stress is developed, accordingly the present study aimed to assess occupational stress and organizational commitment and the relation between both among nurses in Port-Said City that could be achieved through the following **objectives**:

1. Determine level of occupational stress among nurses.
2. Determine level of organizational commitment among nurses.
3. Assess the relationship between occupational stress and organizational commitment among nurses

Research questions:

1. What is the level of occupational stressors in the selected hospitals?
2. To what extent nurses have organizational commitment in the selected hospitals?
3. Is there a relationship between occupational stress and organizational commitment among nurses in selected hospitals?

Subjects and Methods:

Research design:

This study is a correlational study **(Burns & Grove, 2003)** which is conducted to identify the relationship between occupational stress and organizational commitment among nurses

Settings:

This study was carried out at two hospitals in Port Said Governorate, the first hospital is Port-Said General Hospital (El-Amery) affiliated to The Ministry of Health which consists of 11 units including 250 beds with a total number of 200 nurses working in these different units. The second hospital is El-Mabara Hospital affiliated to the Health Insurance Sector, which consists of 12 units including 210 beds with a total number of 117 nurses.

Study subjects:

The subjects of this study included all nursing managers (Matrons, their assistants, supervisors and head nurses) and staff nurses in the two hospitals with a total no. of 186.

Inclusion criteria:

Selection of the studied nurses was based on the following criteria: both sexes and have experience in their current work for more than one year. Determination of sample size of subjects was based on ***Kish and Leslie ;(1965)*** equation. Whereas**,** the proportion of the level of work stress among staff nurses =71, 19% (**Afify, 2000)** and percentile of standard normal distribution by 95% confidence level =1, 96. According to the equation, the total number of nurses was 155 and after adjustment of dropout rate by 20%, the total number of nurses was 186.

Sampling technique:

Staff nurses were chosen from 23 of inpatient units from both selected hospitals according to systematic random sample technique. All staff nurses in each unit are ranked alphabetically then total number of the nurses in the hospital was divided by the estimated sample size (186) minus the number of nurse managers. The sample element was chosen every 3rd one.

Tools of data collection:

Data of this study were collected by using two tools:

Tool I: Occupational Stress Scale**,** it consists of two parts*:-*

Part (1): This part included socio-demographic data such as; age, gender, level of education and years of experience.

Part (2): Occupational Stress Scale included 52 questions. It was developed by **Holmes** and **Rahe, (1987*)*** and adopted from **Afify (2000)**, to assess the occupational stress among nurses. It was divided into six subdivisions:-1) Role stressors that included fourteen questions (e.g.; lack of job description). 2) Task stressors included seven questions (e.g. caring

for terminally ill patients). 3) Patient stressors included four questions (e.g.; caring for uncooperative patients). 4) Physician stressors included seven questions (e.g.; loss of harmony between the supervisors and doctor's orders). 5) Human and physical resource stressors included eleven questions e.g. (lack of equipment, instruments and supplies); and 6) Educational/vocational stressors included nine questions (e.g. lack of proper education preparation for the job*).*

Scoring system:

The scoring system was based on nurses' responses that were high, moderate and low; and scored as 2, 1, and 0 respectively. It was categorized as the following; high stress level (more than 75% of responses), moderate stress level (65% -75% of responses) and low stress level (less than 65%) ***(El-Sayed; 1997)***

Tool II: Three components of Organizational Commitment Instrument: It was developed by **Meyer** and **Allen (1991)** and adapted by **Abd- EL Rahman (2004)** to measure nurses' identification with involvement and loyalty to different commitment foci, it consists of 45 statements. The instrument includes three dimensions, namely; organization, supervisors and work group or colleagues. Responses were measured on a 5-points rating scale ranging from 1 (strongly disagree) to 5 (strongly agree).

Scoring system:

The responses were; strongly agree, agree, uncertain, disagree and strongly disagree and their scores were 5,4,3,2 and 1, respectively. These scores were converted into a percent score. The subject was considered committed if the percent score was 60% or more and non-committed if less than 60%) (**Abd- ElRahman, 2004)**.

Pilot study:

A pilot study was carried out on 10 nurses who were selected from the two hospitals to test the applicability and estimate the time needed to complete the tools; those nurses were excluded from the main sample of research work to assure stability of the answers.

Tools Validity:

The tools of the study were revised by a jury in the field of nursing administration and public health to determine their validity. Cronbach test was used for occupational stress and commitment, alpha=0.91 and 0.88 respectively.

Field work

This study was carried out in the period started from February 2008 to May 2008.The researcher met the respondents during the three shifts to distribute the questionnaires.

Before starting data collection, official letters were addressed from the Dean of the Faculty of Nursing to the directors of the identified settings, requesting approval for the conduction of the study after explanation of its objectives. Written permissions were taken, additionally; an oral consent was taken from each nurse in order to participate in the study. Complete confidentiality of any obtained information was ensured.

Results

The study results revealed that almost half of the studied nurses (49.4%) were in the age between 20 to less than 30 years old in both hospitals. Majority of nurses (86.6%) hold nursing secondary school diploma, with a higher percentage showed in El-Amery hospital (90.3%). More than half of nurses in both hospitals had less than 10 years of experience in nursing.

As shown in **table (1)** the highest percentages of high levels of stressors

as expressed by nurses were in relation to task, educational and vocational and physicians stressors (98.4%, 95.7% & 69.9% respectively). However, 53.8% of nurses expressed high level of stressors compared to less than third of nurses (30.6%) expressed moderate level regarding to patients stressors.

In general, more than half of nurses had high level of occupational stress (56.5%).

Table (2) shows the relationship between nurses' personal characteristics and their levels of stressors in the two studied hospitals. Generally the older nurses recorded high mean scores of stress. According to their current job, staff nurses had higher mean score of occupational stressors in El Amery Hospital versus managers in El-Mabara Hospital, where the nurse managers had the highest mean score (66.39% vs. 65.14%) of occupational stressors. The table also showed that the nurses who had bachelor degree recorded the highest mean score (69.34% & 70.09% respectively) of occupational stressors in both hospitals. As well, nurses who had less than 10 years of experience in current job recorded the highest mean score of stressors (66.55%, & 65.79% respectively) in the two hospitals.

Regarding to nurses commitment, **table (3)** indicates that the majority of nurses in both hospitals (84.4%) were committed, the highest score of commitment showed in relation to colleagues, (84.9%), while the lowest (75.3%) showed in relation to commitment about supervisors. The table also showed that the percentages of committed nurses are higher in El-Mabara Hospital than El-Amery, and the differences between the two hospitals are highly statistically significant in the three items of commitment.

Table (4) shows that nurses in El-Mabara Hospital had more commitment mean score than nurses in El-Amery hospital in all age groups with the highest among 20 to 30 years old (72.38 vs. 66.86) and more than 50 years old (78.84 vs. 68.00). Nurse managers in El Mabara hospital were more committed than staff nurses (74.55%, & 72.09% respectively), while in El-Amery Hospital the nurse managers and staff nurses were committed with nearly equal mean score as well, nurses from the technical institute in El-Mabara Hospital had recorded more commitment mean score as compared to El- Amery Hospital (78.78% vs.70.22%). Figures in the table indicated highly statistically significant differences in socio-demographic characteristics and nurses' commitment.

Table (5) displays that 84.4% of the studied nurses in both hospitals had different levels of stressors and had commitment to their work environment, while the highest percentage of nurses 88.6% expressed high level of stressors but were committed to their work environment.

Table (6) reveals that there were statistically significant correlations between total scores of stressors and total scores of commitment in El-Mabara Hospital. In relation to El-Amery hospital, a statistically significant negative correlation was found between task stressors and commitment items, while, in El-Mabara Hospital a statistically significant positive correlation was found between physician stressors and commitment items. Statistically significant positive correlations were also found in both hospitals in relation to human and physical stressors and commitment items. It was observed that there was significant correlation between stressors items and commitment items in El-Mabara hospital, while totally no statistically

significant difference was found between occupational stress items and commitment items among nurses.

Discussion

Nurses react to stress in different ways, some of them could be coping much better than others and suffering fewer of harmful effects of stress **(Schultz & Schultz, 2002)**. According to this study results, it was notable that variables affecting occupational stress varied in both study hospitals, this may be attributed to the differences between the two health care channels work environment. As regards total occupational stress, there was high level of occupational stress among nurses; this result was not consistent with **Vickie** and **Melinda (1996)** who found that half the respondents experience low levels of burnout. Moreover, **Galinsky, Kim** and **Bond (2001)** found that workload was a primary stress factor. Additionally, **Gillespie, (2001), Mcvicar (2003),** and **Makanjce (2004)** mentioned that the most sources of occupational stress were related to workload and task overload. Regarding commitment, results revealed that majority of nurses in both hospitals were committed; the highest score of commitment shown was related to colleagues. This may be related to our tradition and social habits which characterized by emotionally attachment to our colleagues that push us to be more loyal and support to each other in work. Moreover, this finding is consistent with that of **Tumulty, Jernigan** and **kohut (1995)** and **Abd El- Rahman, (2004)** findings which clarified that nurses in critical care units feel a sense of obligation to stay committed to their work group because of a sense of loyalty, as they are more close to each other, due to their unit's work nature. As well, the findings of the present study showed that nurses displayed lowest commitment scores to supervisors. This finding was on the same line with **Ali, (2006)** who clarified that lowest loyalty level from nurses to their supervisors is related to the fact that nurses perceived lacking of sufficient power from their supervisors. Moreover, **Wilson** and **Lascinger, (1994)** claimed that low commitment to supervisors might be due to the fact that supervisors are less apart from the unit and far from its daily events and problems. In this respect **(Becker et al., 1996)** claimed that, enhancing commitment to supervisors goals needed acquisition of supervisors by basic skills of leadership, socialization and team building, that will affect performance to a greater extent. Human resources are the most important asset in an organization. Nonetheless, the existence of stress in the workplace would reduce nurses' contribution to the organization. This was because, nurses under stress usually had poor performance, more likely to be absent from the workplace, more prone to have accident in the workplace and had higher level of occupational stress. In addition, lack of nurses' commitment towards the organization could also affect organization performance **(Ashari, 2005)**. In spite of the aforementioned result of the present study revealed that there was no statistically significant difference between total level of occupational stress and total level of commitment. Contrary with **Viljoen** and **Rothmana, (2009)** who mentioned that occupational stress affected the commitment relation between the organization and individual

Conclusion:

Based on the study findings, it can be concluded that although most of the nurses were committed to their organizations, they also had high level

of occupational stress. No statistically significant relationship between occupational stress and organizational commitment among the nurses in Port-Said City Hospital was found.

Recommendations:

In the light of the study findings, the authors recommended the following:

1. Time management program should be provided to nurses in order to decrease task stressors.
2. Assessment of nurses' educational needs and conduction of in-service training to cover these needs and to decrease educational stressors.
3. Maintain open communication channels between administrators and their subordinates through periodical meetings to discuss and solve problems and resolve stress.

Table (1): Levels of stressors as expressed by nurses in the two studied hospitals.

Stressors	Stressors' Levels	Hospital						X^2
		El-Amery n= 93		El-Mabara n= 93		Total		
		No	%	No	%	No	%	
Role stressors	High	39	41.9	47	50.5	86	46.2	1.418
	Moderate	28	30.1	23	24.7	51	27.4	
	Low	26	28.0	23	24.7	49	26.3	
Task stressors	High	92	98.9	91	97.8	183	98.4	FE #
	Moderate	1	1.1	2	2.2	3	1.6	
	Low	-	-	-	-	-	-	
Patient stressors	High	50	53.8	50	53.8	100	53.8	2.549
	Moderate	32	34.4	25	26.9	57	30.6	
	Low	11	11.8	18	19.4	29	15.6	
Physician stressors	High	65	69.9	65	69.9	130	69.9	0.902
	Moderate	23	24.7	20	21.5	43	23.1	
	Low	5	5.4	8	8.6	13	7.0	
Human & Physical stressors	High	49	52.2	51	54.8	100	53.8	1.207
	Moderate	14	15.1	18	19.4	32	17.2	
	Low	30	32.3	24	25.8	54	29.0	
Educational &Vocational stressors	High	91	97.8	87	93.5	178	95.7	FE #
	Moderate	2	2.2	6	6.5	8	4.3	
	Low	-	-	-	-	-	-	
Total	High	45	48.4	60	64.5	105	56.5	6.432 *
	Moderate	30	32.3	16	17.2	46	24.7	
	Low	18	19.4	17	18.3	35	18.8	

** Statistically significant at p value = <0.05 # FE: Fisher Exact Test*

Table (2): Relationship between nurses' personal characteristic and their level of stressors in the two studied hospitals

Demographic Characteristics	Stressors' Levels				t-test	P-value
	El-Amery (n=93)		El-Mabara (n=93)			
	Mean	±SD	Mean	±SD		
Age group (years):						
<20	65.06	8.98	64.26	10.96	0.18	0.863
20-	66.86	11.40	65.22	10.62	0.71	0.481
30-	61.22	13.29	62.36	11.47	0.26	0.794
40-	69.50	8.82	58.76	12.37	1.90	0.090
50 +	63.46	9.38	66.79	9.80	0.76	0.458
Current job:						
Nurse managers	64.00	12.26	65.14	10.78	0.35	0.727
Staff nurses	66.39	10.47	36.90	10.90	1.35	0.178
Level of education:						
Nursing diploma	65.51	10.96	63.38	10.57	1.25	0.212
Technical institute	65.38	14.99	63.46	3.95	0.22	0.849
Bachelor of nursing	69.34	10.50	70.09	12.63	0.13	0.896
Experience in the current job (years):						
< 10	66.55	10.52	65.79	10.46	0.41	0.684
10 -	66.40	11.98	61.08	10.18	1.54	0.132
20 +	61.05	11.19	58.17	16.72	0.32	0.764

Table (3): Distribution of the commitment items among nurses in the studied hospitals.

Commitment Items	Hospitals	Commitment				X^2	p-value
		Committed		Not committed			
		No	%	No	%		
Commitment about:	El-Amery	62	66.7	31	33.3	10.920	0.001*
organization	El-Mabara	81	87.1	12	12.9		
	Total	143	76.9	43	23.1		
Supervisors	El-Amery	63	67.7	30	32.3	5.661	0.017*
	El-Mabara	77	82.8	16	17.2		
	Total	140	75.3	46	25.7		
Colleagues	El-Amery	73	78.5	20	21.5	6.054	0.014*
	El-Mabara	85	91.4	8	8.6		
	Total	158	84.9	28	15.1		
Total	El-Amery	74	79.6	19	20.4	3.309	0.069
	El-Mabara	83	89.2	10	10.8		
	Total	157	84.4	29	15.6		

** Statistically significant at p value = <0.05*

Table (4): Relationship between nurses' personal characteristics and commitment.

Demographic Characteristics	Hospital				t-test	P-value
	El-Amery (n=93)		El-Mabara (n=93)			
	Mean	±SD	Mean	±SD		
Age group (years):						
< 20	62.79	8.72	65.72	8.21	0.79	0.442
20 -	66.86	8.97	72.38	11.17	2.62	0.010*
30-	66.32	6.79	71.62	9.68	1.90	0.065
40-	71.07	12.59	79.26	1.98	2.06	0.058
50 +	68.00	9.77	78.84	5.83	2.90	0.012*
Current job:						
Nurse Managers	66.74	9.34	74.55	10.17	2.86	0.006*
Staff nurses	66.85	9.40	72.09	10.26	3.09	0.003*
Level of education:						
Nursing diploma	66.42	9.34	72.68	9.52	4.20	0.001*
Technical institute	70.22	9.81	78.78	14.22	0.94	0.378
Bachelor of nursing	70.67	9.45	71.41	13.45	0.14	0.894
Experience in the current job (years):						
< 10	66.52	9.32	72.08	11.05	3.06	0.003*
10-	64.89	7.11	74.19	8.54	3.89	0.001*
+ 20	71.04	11.46	75.56	4.04	1.20	0.248

** Statistically significant at p value=< 0.005*

Table (5): Relationship between nurses' occupational stressors and commitment in the two studied hospitals.

Stressors' Levels	Commitment					
	Committed		Not committed		Total	
	No.	%	No.	%	No.	%
High	88	83.8	17	12.6	105	100
Moderate	38	82.6	8	17.4	46	100
Low	31	88.6	4	11.4	35	100
Total	157	84.4	29	15.6	186	100

X^2= 0.603 P-value = 0.740

Table (6): Correlation between Stressors items and commitment items among nurses in the studied hospitals.

Stressors items	Hospital	Commitment about							
		Organization		Supervisor		Colleagues		Total	
		r	P	r	P	r	P	r	P
Role stressors	El-Amery	0.02	0.872	-0.05	0.643	-0.02	0.889	-0.02	0.858
	El-Mabara	0.11	0.308	0.09	0.388	0.16	0.123	0.14	0.172
	Total	0.05	0.460	0.01	0.856	0.06	0.383	0.05	0.462
Task stressors	El-Amery	-0.13	0.215	-0.21	0.042*	-0.15	0.154	-0.21	0.050*
	El-Mabara	0.20	0.057	0.11	0.296	0.15	0.145	0.19	0.075
	Total	0.01	0.848	-0.08	0.289	-0.03	0.743	-0.03	0.656
Patients stressors	El-Amery	-0.10	0.339	-0.01	0.962	-0.11	0.325	-0.09	0.401
	El-Mabara	-0.03	0.784	0.15	0.156	0.06	0.572	0.06	0.543
	Total	-0.05	0.467	0.08	0.292	-0.01	0.911	0.01	0.970
Physicians stressors	El-Amery	0.03	0.805	0.05	0.663	0.04	0.682	0.05	0.649
	El-Mabara	0.16	0.121	0.15	0.152	0.24	0.020*	0.22	0.035*
	Total	0.09	0.220	0.09	0.218	0.13	0.069	0.13	0.086
Human and Physical stressors	El-Amery	0.04	0.684	0.20	0.056	0.27	0.010*	0.21	0.041*
	El-Mabara	0.24	0.024*	0.12	0.238	0.21	0.040*	0.23	0.026*
	Total	0.13	0.090	0.15	0.044*	0.22	0.003*	0.20	0.008*
Educational and Vocational stressors	El-Amery	-0.02	0.827	0.04	0.693	-0.04	0.734	0.01	0.940
	El-Mabara	0.12	0.268	0.08	0.452	0.11	0.317	0.12	0.251
	Total	0.03	0.729	0.04	0.609	0.01	0.914	0.03	0.703
Total	El-Amery	-0.01	0.892	0.04	0.725	0.05	0.633	0.03	0.774
	El-Mabara	0.21	0.045*	0.17	0.111	0.24	0.019*	0.25	0.017*
	Total	0.08	0.264	0.08	0.260	0.12	0.097	0.12	0.117

** Statistically significant at (p values = <0.05 r: Pearson correlation coefficient*

References:

1. **Aamodt M., (2007).** Industrial/ organizational psychology: An applied approach, 5th ed. Thomson Wadsworth Co. U.S.A.: pp.512-542.
2. **Abd El-Rahman R. (2004).** The Relationship between Health Care Organizational Culture and Nurses' Commitment to work Baccalaureate Nursing Graduate. Unpublished Master Thesis in Nursing Administration, Faculty of Nursing. Alexandria University.
3. **Afify F., (2000).** Study of Absenteeism and Factors Contributing to it among Head and staff Nurses. Unpublished Master thesis, Suez Canal University.
4. **Ali S., (2006).**The Relationship between Head Nurses' Commitment and their Performance. Unpublished MSCN, Thesis in Nursing Administration, Faculty of Nursing, Alexandria University.
5. **Ashari H., (2005).** The Relationship between Organizational commitment and stress level among academicians Unpublished MSCN. Thesis in Nursing Administration, Faculty of Nursing, technology Malaysia University. www.sciencedirect.com Accessed at 23 may.
6. **Atkinson W., (2000).** When Stress won't go away HR Magazine, 44 (12). 52-59.
7. **Becker T., Randall D., & Riegel C., (1996).** The Multi-Dimensional view of commitment and the Theory of Reasoned action: A comparative evaluation. Journal Manag. 21 (4): 617-638.
8. **Bolino M. & Turnely H., (2005).** The Personal Costs of Citizenship behavior: The Relationship between Individual Initiative and role overload, Job Stress and Work Family Conflicts. Journal of Applied Psychology, 90 (4):740-748.
9. **Burns N. & Grove S K., (2003).** Understanding Nursing Research. 3rd ed., Philadelphia: Saunders Co. pp: 286-287.
10. **Chang C. and Rosen C., (2003).** A Meta Analysis Review of Perceived Organizational Politics and its outcomes. Poster presented 18th annual meeting of Society for industrial and Organizational Psychology.
11. **Ellis J. & Hartley C. (2008).** Nursing in today's world. Challenges, issues, trends, 9th ed. Philadelphia: J.B. Lippincott Williams and wilkins Co. P. 40.
12. **El-Sayed K., (1997).** The Relation between perceived role Conflict and Role Ambiguity with Stress Level among New Baccalaureate Nursing Graduates and Interns in Tanta University Hospital. Unpublished Master Thesis. Faculty of Nursing.
13. **Galinsky E., Kim S., & Bond J., (2001).** Feeling over worked: When Work Becomes to Much. New York: Families and Work Institute, 18-25.
14. **Gillespie N. (2001).** Occupational Stress in Universities: staff Perceptions of the Causes, Consequences and Moderators of stress, Work & Stress, 15, (1).53-72: Available at: http://www.trandf.co.uk/journals/
15. **Gurney C., Muller C., & Price J., (1997).** Job Satisfaction and Organizational attachment of Nurses Holding Doctoral degrees. Nursing Research, 49 (3): 163-170.
16. **Holmes T, & Rahe R., (1987).** The Social Readjustment Rating Scale. Journal Psychosomatic Research, 11(2).213-218.
17. **Jordan G, (2004).** Tips for Creating a Committed Workplace," Business Record. Pp. 4. 24.

18. **Kish & Leslie, (1965).** Survey Sampling, New York: John Wisely and Sons.
19. **Lee V. & Henderson M., (1996).** Occupational stress and Organizational commitment in nurse administrators. JONA.26 (5). 21-28.
20. **Makanjce C., (2004).** The Effect of Occupational Stress and Organizational Commitment on Diagnostic Imaging Radiographers in Rendering Quality Service. Unpublished Msc N, Thesis in Radiographic sciences, Faculty of Health Sciences, University of Pretoria.
21. **Mcvicar A., (2003).** Work place stress in nursing: a literature review. Journal of advanced nursing, 44 (6), 633-642.
22. **Meyer J. & Herscovitch L., (2001).** Commitment in the workplace: Toward a general Model. Human Resource Management Review, 11: 299-326.
23. **Meyer P. & Allen G., (1991).** Three-component Conceptualization of organizational commitment Human Resources Mg.; (1), 61-89. Available at: http://www.find articules.com / CS_0/M4256/.
24. **Miller B., Ruther F M., & Koldinsky R. (2006).**Outcomes Associated with Perceptions of Organizational Politics: A meta-Analysis. Poster Presented at the 21st annual conference of society for Industrial and Organizational Psychology.
25. **Muse L., Harris S., & Field H. (2003).** Has the Inverted – U Theory of Stress and Job Performance had a fair Test? Human Performance, 16 (4). 349-364.
26. **Sauter S., Murphy L., Colligon M., Sulan N., Hurrdl J.,& Scharf F. (1999).** Stress at Work. National Institute for Occupational Safety and Health (NIOSH Pub. 1999.No.99-101) Retrived September 24, from http:// www.cdc.gov/niopsh/stresswk.html
27. **Schultz D. & Schultz E. (2002).** Psychology and work today. 8th ed., India: Pearson education, Inc. Pp. 12-17.
28. **Sullivan E & Decker P., (2005).** Effective Management in Nursing. 4th ed., California; Addison Wisely Co. Pp. 216-223/388-394.
29. **Tumulty G, Jernigan I, & kohut G., (1995).** Reconcepualizing organizational commitment JONA. 25(1):61-65.
30. **Vickie L. & Melinda H., (1996)**. Occupational Stress and Organizational Commitment in Nurse Administrators. JONA. 26(5). 21-28.
31. **Viljoen J. & Rothmana S. (2009).** Occupational stress, ill health and organizational commitment of employees at university technology, Journal industrial psychology. 35 (1).82-101.
32. **Wilson B. & Laschinger K. (1994**). Staff nurse perception of job empowerment and organizational commitment: A test of kanters theory of structural power in organization. JONA, 24(48): 39-47.
33. **Yoder-Wise P. (2007).** Leading and Managing in Nursing, 4th ed. Canada, Mosby, Inc. Pp. 533-540.

العلاقة بين الضغط المهني والإنتماء الوظيفي لدى الممرضات في مستشفيات مدينة بورسعيد

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مقدمة:

يعتبر الضغط المهني في المجتمع الحديث مشكلة شائعة وخاصةً في التمريض نتيجة التعرض لعوامل عديدة في بيئة العمل و الأحوال الوظيفية، و أصبح الارتباط و الانتماء للمؤسسة مؤقت وأصبح العلماء في حاجة إلي فهم كيفية تطور الإنتماء الوظيفي كما أن العاملين بالتمريض يحتاجون لمصادر جديدة لإعادة تعزيز الإنتماء للمؤسسة.

الهدف من البحث:

تحديد مستوى الضغوط المهنية و مستوى الإنتماء الوظيفى بين الممرضات و إيجاد العلاقة بينهم.

مكان البحث:

أجريت هذه الدراسة فى مستشفى بورسعيد العام (الأميري) التابع لوزارة الصحة و مستشفى المبرة التابع لقطاع التأمين الصحى فى محافظة بورسعيد.

عينة البحث:

إشتملت عينة البحث علي ١٨٦ ممرضة منهم رئيسات التمريض و مشرفات الأدوار و رئيسات الأقسام وممرضات الأقسام .

النتائج:

أسفرت نتائج هذه الدراسة عن أن أكثر من نصف عينة الممرضات (٥٦,٥ %) كن أكثر تعرضا للضغط المهني. وجد أن أعلي مصادر الضغوط علي الممرضات هي ضغوط متعلقة بمهام العمل و ضغوط متعلقة بالتعليم و المهنة وضغوط متعلقة بالأطباء وهي كالأتي ٩٨,٤% ، ٩٥,٧ % ، ٦٩,٩ %.

أظهرت النتائج أن أعلي نسبة من الممرضات لديهن إنتماء وظيفي ٨٤,٤ %. كما وجد أن أعلي نسبة من الإنتماء الوظيفي ٨٤,٩ % متعلق بالإنتماء نحو الزملاء.

أظهرت النتائج أن هناك علاقات ذات دلالة إحصائية بين الضغط المهنى والإنتماء الوظيفى فى مستشفى المبرة على الرغم من أنه بصفة عامة لا توجد دلالة إحصائية في العلاقة بين الضغط المهني و الضغط الوظيفي لدى الممرضات بكلا من المستشفى العام و مستشفى المبرة بمدينة بورسعيد.

التوصيات:

أوصت الدراسة باعداد و تنفيذ برامج للممرضات لاكتساب مهارات إدارة الوقت وذلك لتقليل الضغوط المهنية، تشجيع الممرضات علي حضور دورات تدريبية داخل المستشفيات وعمل برامج التعليم المستمر داخل و خارج المستشفى.

Predictors for Staff Nurses' Turnover in Private and Main Mansoura University Hospital.

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Abstract

Turnover is a challenging issue that represents a major problem for nursing and health care in terms of costs, the ability to care for patients, and the quality of care given. So, this study aimed to identify the predictors for staff nurses' turnover in private and in Main University Hospitals. A descriptive design used in the present study. The study carried out in four private hospitals, (El- Kheir Hospital, El-Delta, El- Hekma Hospital, and finally El- Zeraaien), and Main Mansoura University Hospital. The sample included 260 staff nurses (114 from private hospitals, and 146 from Main Mansoura University Hospital). Data collected through using Turnover Sheet that included two parts, the first part contains sociodemographic characteristics, and the second part was predictors of turnover. This study showed that there was a statistical significant difference among overall predictors for staff nurses' turnover. Supervision was the first predictor for turnover in private and in Main Mansoura University Hospitals, while, advancement was the last predictor for turnover in private hospitals, and pay was the last predictor for turnover in Main University Hospital. It is recommended that nurse mangers have to introduce motivational ideas in their job design and allows staff nurses to participate in decision-making, increasing tangible and intangible rewards as providing better pay and benefits, creating a friendly and supportive working atmosphere.

Keywords: Turnover, Turnover predictors, staff nurses' turnover

Introduction

Turnover is a challenging issue that represents a major problem for nursing and health care in terms of costs, the ability to care for patients and the quality of care given **(Griffin, 2005).** Staff nurses' turnover creates staffing shortages that increase the work demands placed on the organization's remaining staff nurses which heightens the risk of the remaining staff nurses quitting due to excessive workload, this result in a "vicious cycle" of constantly increasing staff nurse turnover within an organization which result in creating a disruptive, unstable work environment that negatively impacts the retention of other medical service providers that work with the staff nurses, which increase accident and absenteeism rate **(Brown, 2006).**

Turnover is the rate at which staff nurses are replaced with new staff nurses in an organization. "Quits" is probably the most common label used to designate voluntary separation. It is important for the organization to conduct thorough analyses of its turnover through a turnover audit which helps it to identify the

proportion and type of turnover that needs to control and help it to apply a retention management programs **(Sullivan & Deker, 2005).**

There is no single "silver bullet" solution that will create reduction in nursing turnover across the board and not all turnovers are controllable or avoidable. It depends on clear understanding of type and causes of turnover **(Charles, 1993).** There are several models that help focus on the possible causes of turnover. Generally, these models agree that the best single predictor of actual turnover is turnover intension. Focusing on the turnover intension of present staff nurses may help curb unwanted turnover **(Cavanagh, 1990).** If the organization has high rates of involuntary turnover, then the careful examination of recruitment, selection, training and motivation strategies are important. If turnover is voluntary, then the organization needs to look at factors that influence nurses to leave, namely: intrinsic and extrinsic factors according to Herzberg's theory **(Certo, 2003).** So that, the human resource department is responsible for ensuring the implementation of effective induction and orientation programs that are designed to lower the turnover rate **(Wolper, 1999).**

Numerous studies have been conducted in USA to increase understanding about turnover phenomena as Nursing turnover: costs, causes, and solutions (**Cavanagh, 1992).** Factors influencing nursing turnover in selected private hospitals **(Lavin & Stern, 2007).** The cost of nursing turnover and its impact on nurse and patient outcomes **(Mansfield, 1997).** And staff nurses turnover in neonatal intensive care units **(Kelly, 2008).**

Some studies done in Egypt focus on the relation between absenteeism and turnover among hospital nurses in governmental hospitals in Alexandria **(Yousif, 1999)**. Rate and causes affecting turnover among private and governmental selected hospitals in Cairo **(Aly, 1998)**. And variables that induce hospital nurses to leave their jobs in governmental hospitals in Cairo and Tanta **(Shabaan, 1988).**

Aim of the study

The aim of this study is to determine predictors for staff nurses' turnover in private and Main Mansoura University Hospital.

Research Questions:-

1. What are the predictors for staff nurses' turnover in private and Main Mansoura University Hospitals?
2. What are the levels of predictors for staff nurses' turnover in private and Main Mansoura University Hospitals?

Materials and Methods

Research design:

The design of the study was a cross – sectional descriptive one.

Setting:

The study was carried out in four numbers of private hospitals (n = 4); they are El- Kheir Hospital (78 beds), El-Delta Hospital (90 beds), El-Hekma Hospital (30 beds), and finally El- Zeraaien Hospital (40 beds), as well as Main Mansoura University Hospital (1900 beds).

Subjects:

The sample of this study is 260 staff nurses. (114 from private hospitals and 146 from Main Mansoura University Hospital)

Tools of data collection:

Turnover Sheet: it consists of two parts:

- ***The first part***: It included demographic data of the staff nurses as hospital name, unit,

age, educational qualifications, years of experience, marital status, and area of residence.

- ***The second part:*** The Turnover Sheet that developed by the researcher based on Herzberg's satisfaction model **(Certo, 2003).** The aim of this tool was to determine predictors for staff nurses' turnover in private and in Main Mansoura University Hospitals. It included eight groups which are: pay (2 items), fringe benefits (8 items), work condition and policy (5 items), relationship with others (7 items), supervision (12 items), responsibility (2 items), achievement (6 items), and advancement (2 items) .

Each statement response was measured on a five point likert scales that ranged from 1 = poor to 5 = excellent. Scoring system According to **Ahmed (2008)**: Low predictor for turnover: 0 – 49%, Moderate predictor: 50 – 75%, High predictor: > 75%

The tool was translated by the researcher into Arabic and tested for validity by five experts in nursing administration from faculties of nursing and accordingly the necessary modification as change in some words was done. The reliability of the tool was assessed by using pre-test and test (r = .998).

Fieldwork:

The actual fieldwork started at the beginning of February 2010 and was completed by the end of March 2010. Data collected through meeting with the staff nurses, and explains the purpose of the study to them. The time needed by staff nurses to complete the sheet was 20-30 minutes.

Staff nurses' turnover rate was obtained through a retrospective review of hospital personnel records for a period of three years from 2006 to 2008.

Administrative and ethical considerations:

The purpose of the study was explained to the administrative personnel. Official permissions were obtained from the hospitals' directors and nurses' directors to conduct the study at the selected hospitals. They were reassured that the information collected was being treated confidentially, and it would be used only for the research purpose, and no names appeared on the sheet.

Pilot study:

A Pilot study was conducted on 26 staff nurses from Main Mansoura University Hospital that randomly selected, (10%) of the study sample and excluded from the total sample, after the development of the tool and before starting data collection. The aim of the pilot study was to determine the applicability of the designed tool, and the time consumed for filling the sheet, and also to test clarity of the language. It also helped to test the suitability of the study settings. And, accordingly necessary modifications were done. The completion of each individual sheet took about 20-30 minutes.

Statistical design:

The sample from the private hospitals includes all the assigned staff nurses who have either diploma or baccalaureate degree with at least one year of experience (n = 114 staff nurses), are included from: El –Kheir Hospital (42 staff nurse), El – Delta Hospital (28 staff nurse), El – Hekma Hospital (23 staff nurse), and finally El – Zeraaien Hospital (21 staff nurse).

The sample size from Main Mansoura University Hospital (147 staff nurse) calculated using (EPI. info soft ware version 6.02 taken into

consideration the expected rate of turnover in previous studies (13%) **(Bingham & Sitter, 1999).**

Data collected were analyzed, and results were tabulated by using (frequency, percentage (%), mean (χ), and standard deviations (S.D ±).

- Tests of significance were used to compare study groups and analysis of variance.
- P- Values, which were less than 0.05, were considered as statistically significant, and, less than <.001, were considered as very highly statistically significant.

Results:

Table (1) describes the socio-demographic characteristics of staff nurses working in private and Main Mansoura University Hospitals. According to the table, 18.4% of staff nurses in private hospitals working in intensive care units, while in Main University Hospital the majority working in surgical units (19.9%).

As regard staff nurses' age nearly one third of them belonged to the age group25 – 30 years and worked in the private hospitals compared to 36.3% belonged to the age group 20 – 25 years and worked in the Main Mansoura University Hospital. Also 44.7% of the staff nurses in private hospitals had diploma degree in nursing while 68.5% of those worked in the Main Mansoura University Hospital had diploma in nursing.

Concerning marital status 66.7% of staff nurses in the private hospital married, 48.3% had less than 10 years experience and 57.9% lived in suburban areas, on the other hand, 80.8% of the staff nurses worked in Main University Hospital married and 28.1% of them had experiences less than 10 years and 58.2 of them lived in suburban areas.

Table (2) describes the mean score of predictors for staff nurses' turnover in private and Main Mansoura University Hospitals. It is noticed that the mean score of total predictors was (135.18 ±8.85) in private hospitals, compared to (109.66±27.89) in Main University Hospital. The highest mean score of turnover predictors was the supervision for both private and University Hospital (39.02 ±4.39, 32.08 ±11.74 respectively). The difference between the two mean score for supervision were statistically significant p = <0.001, while advancement had the lowest mean score predictors in private hospitals (2.07 ±.27), and the pay mean score was the lowest turnover predictors (3.32 ± 1.57) among the staff nurses worked in the Main University Hospital.

Table (3) shows the levels of predictors for staff nurses' turnover in private and in Main University Hospitals. Concerning the moderate predictors for turnover among the studied private hospitals were payment (65.5%), policy (71.9%), and responsibility (52.9%). While the moderate level of predictors for staff nurses' turnover in Main University Hospital were supervision, relation with others, benefits, policy, and payment (66.11%, 61.8%, 59.1%, 53.5%, and 50.4% respectively).

Discussion:

Nurses' turnover is a major long-standing health problem faced by all hospitals. So, it is important to identify the predictors for this turnover that helps to curb unwanted turnover. The present study shows that the prediction for turnover in Main Mansoura University Hospital is higher than in private hospitals. As regard to predictors, supervision was scored as the first predictor by staff nurses in private and Main Mansoura University Hospital, while, advancement had the

lowest score in private hospitals, and pay had the lowest score in Main University Hospital.

As regard to supervision, it was scored as the first predictor by staff nurses in private and Main Mansoura University Hospital. This is highly reasonable, as what staff nurses expect from their supervisors do not differ whether they work in private or Main University Hospital. It is important for supervisor to give direction or feed back at work, praises for good work, assist in teaching his staff, access of staff nurses to manager, advocate staff nurses rights, able to solve problem and complain, know his job well, use his authority appropriately, be around when needed, fair in dealing with staff nurses and give freedom to staff nurses to give their opinion. However, this result is inconsistent with that of **Aly (1998)** who stated that there was a significant difference between hospital sectors regarding the characteristics of managers.

Scoring of supervision as the first predictor for turnover, is supported by **(Jones, 2006)** who reported that supervision is an important factor that affect staff nurses satisfaction and enhance staff nurses' retention. In general, supervision, relationships with supervisors and managers' support were considered important predictors for staff nurses turnover. And also consistent with **Ivancevich (2004)** who stated that improving the quality of supervisors is an important factor helps in the reduction of attrition. Furthermore **(Charles,1993)** found that excellent first line managers who promoted communication, group problem solving, support, shared governance and staff control of the practice environment were found to be important factors in influencing the retention of staff nurses.

As regard to pay, it is noticed that it had the last score of prediction for turnover in Main Mansoura University Hospital. This result is consistent with **Kelly (2007)** who reported that psychological rewards are more important than salary or social rewards in keeping staff nurses on the job, and claimed that higher pay does not prevent staff nurses from quitting. It is supported with **Jones (2006)** who reported that salary was important in attracting a person to a job but by itself was not an important motivator in retention. But scoring of pay as the last predictor is not consistent with that of **Sullivan** and **Deker (2005)** who found that twenty seven percent of his study members leave the job to receive more pay. The result of the present study is unexpected because people are motivated to work hard if they see a link between working hard and pay they receive.

On the other hand, pay was more significant predictor for turnover in private hospitals, and not the last one as in Main Mansoura University Hospital. **Hunsaker (2005)** who reported that opportunity for getting higher salary is a driving force behind staff nurses' intention to leave their jobs in private hospitals, since staff nurses expressed their dissatisfaction with salary and ranked opportunity for getting higher salary as one of the most important variables that induced them to change their job.

As regard to Advancement as a predictor for staff nurses turnover, it had the lowest score in private hospitals, although it had an important impact on improving the career of nursing that provide staff nurses with self-esteem and self-actualization. This is consistent with **Kacel** and **Miller (2005)** who reported that no significant relationship between advancement and increased turnover. On controversy to **Tomey (2009)** who reported that, staff nurses who have good opportunities to

advance occupationally intended to remain in their jobs.

Conclusion:

The study concluded that:

- There was statistical significant difference among overall predictors of staff nurses' turnover in private and in Main Mansoura University Hospitals.
- The total score of predictors for turnover was higher in private hospitals than in Main Mansoura University Hospital, which proved statistically.
- The first predictor for turnover in private and in Main Mansoura University Hospitals was supervision, while advancement was the last predictor in private hospitals, and pay was the last predictor in Main Mansoura University Hospital.
- According to scoring system, the total predictors for staff nurses' turnover in private hospitals lies in moderate level of predictors for turnover, while in Main Mansoura University Hospital the total predictors lies in low level of predictors for turnover.
- There was statistical significant difference between predictors for staff nurses' turnover, and socio-demographic characteristics as: age, educational qualification, and years of experience, that means the predictors for turnover was higher in younger age staff nurses than in older age, in diploma degree in nursing than in baccalaureate degree, and in staff nurses less than 5 years of experience than those who had 5 years of experience.

Recommendations:

Based on the results of the study, the following recommendations are suggested:

1. The nurse managers have to work towards increasing the tangible and intangible rewards offered by the health care institutions. Such rewards include providing better pay and benefits, creating a friendly and supportive working atmosphere, allowing and participation in decision-making.

2. The nursing managers should provide orientation programs to the new nursing graduates that helping in their transition from being students to being staff nurses.

3. Administrative personnel should be sensitive to the staff nurses' needs for recognition, achievements, autonomy, responsibility, encouragement, and professional development.

4. The administrative personnel should develop criteria for the proper selection and training of nursing managers on supervision and relationship.

Table (1): Socio-demographic characteristics of staff nurses working in private and Main Mansoura University Hospitals

Items	Private hospitals (n = 114)		Main University hospital (n = 146)	
	No	%	No	%
Unit				
Neurology	14	12.3	26	17.8
I.C.U	21	18.4	8	5.5
General medical	19	16.6	28	19.2
Obstetric	2	1.8	23	15.8
General surgical	16	14.0	29	19.8
Dialysis	14	12.3	5	3.4
Operation	14	12.3	27	18.5
Pediatric	14	12.3		
Age				
< 20years	16	14.0	9	6.2
20-	29	25.4	53	36.3
25-	42	36.8	20	13.7
30-	24	21.2	27	18.5
> 35 years	3	2.6	37	25.3
Educational qualification				
Diploma degree in nursing	51	44.7	100	68.5
Technical nurse institute	3	2.6	22	15.1
Diploma + specialty	29	25.4	14	9.6
Baccalaureate degree	31	27.2	10	6.8
Marital status				
Married	76	66.7	118	80.8
Single	19	16.7	24	16.4
Widow	9	7.8	2	1.4
Divorced	10	8.8	2	1.4
Years of experience				
< 5 years	18	15.8	33	22.6
5-	55	48.3	41	28.1
-10	22	19.3	22	15.1
15-	11	9.6	22	15.1
>20 years	8	7.0	28	19.2
Residence area				
rural	48	42.1	61	41.8
Suburban	66	57.9	85	58.2

Table (2): Mean score of predictors for staff nurses' turnover in private and Main Mansoura University Hospitals.

Predictors for turnover	Maximum score	Private hospitals (n=114)	Main University Hospital (n=146)	t-test	p-value
		$\bar{X}$ ± S.D	$\bar{X}$ ± S.D		
Pay	10	8.20±1.14	3.32±1.57	27.9	<0.001*
Benefits	40	21.15±2.97	13.55±5.18	13.95	<0.001*
Policy	25	20.46±2.28	12.60±7.30	17.64	<0.001*
Relation	35	30.37±3.30	23.14±7.30	9.81	<0.001*
Supervision	60	39.02±4.39	32.08±11.74	5.99	<0.001*
Responsibility	10	7.19±1.25	5.91±3.04	4.22	<0.001*
Achievements	30	6.70±1.06	12.35±6.25	9.54	<0.001*
Advancement	10	2.07± 0.27	6.18±2.6	16.76	<0.001*
Total	220	135.18±8.85	109.66±27.89	11.25	<0.001*

** Statistical significant difference (p<0.001).*

Table (3): Levels of predictors for staff nurses' turnover in private and in Main University Hospitals according to scoring system.

Predictors for turnover	Levels of predictors in private hospitals (n=114)		Levels of predictors in Main University hospital (n=146)	
	%	level	%	level
Pay	65.5	Moderate	50.4	Moderate
Benefits	81.5	High	59.1	Moderate
Policy	71.9	Moderate	53.5	Moderate
Relation	82	High	61.8	Moderate
Supervision	86.8	High	66.11	Moderate
Responsibility	52.9	Moderate	41.2	Low
Achievements	22.3	Low	33.8	Low
Advancement	20.7	Low	33.2	Low
Total	61.4	Moderate	49	Low

Low level of predictors: 0 – 49%
Moderate level of predictors: 50 – 75%
High level of predictors: > 75%

References:

1. **Ahmed W. (2008).** Work motivators and empowerment. MSc. Thesis. Ain Shams University. Faculty of Nursing.
2. **Aly A. (1998).** Rate and causes of turnover among nurses in selected hospitals in Cairo. MSc. Thesis. Cairo University. Faculty of Nursing.
3. **Bingham N. & Sitter R. (1999).** Fundamentals of probability. 7th ed. New York: HaughtonMifflin Com. P41-42**.**
4. **Brown M. (2006).** An experimental approach to organization development. 7th ed. New York. Mc Graw Hill Irwin Comp. p.240- 41.
5. **Cavanagh S. (1990).** Predictors of nursing staff turnover. 1st ed. Aspen Comp. P. 373-380.
6. **Cavanagh S. (1992).** Staff turnover among hospital nurses. JONA. 17 (3) : 13
7. **Certo S. (2003).** Supervision concepts and skill building. 4th ed. New York. Mc Graw Hill Irwin Comp. p.416.
8. **Charles M. (1993).** Personnel administration a point of view and a method. 9th ed. London. Mc Graw Hill International Comp. p. 217-219.
9. **Griffin R. (2005).** Management. 8th ed. U.S.A. Houghton Mifflin comp. p.512.
10. **Hunsaker P. L. (2005).** Management a skills approach. 2nd ed. U. S. A. prentice Hall comp. p440
11. **Ivancevich J. M. (2004).** Human resource management. 9th ed. New York. Mc Graw-Hill comp. p310.
12. **Jones C. B. (2006).** Staff nurse turnover costs. Part II. Measurements and results. J Nurs Admi 20(5): 27-32.
13. **Kacel B. & Miller M, (2005).** Measurement of nurse practitioner job satisfaction in a Midwestern State Journal of the American Academy. 17(1): 27
14. **Kelly P. (2007).** The staff development. 3rd ed. London. Thomson Comp. p.512-519.
15. **Kelly P. (2008).** Nursing leadership and management. 2nd ed. U.S.A. Lippincott Williams and Wilkin Comp. p7-12.
16. **Lavin D. & Stern G. (2007).** Human resource management. 5th ed. U.S.A. Lippincott Williams and Wilkin Comp. p.403-06.
17. **Mansfield J. C. (1997).** Turnover among nursing home staff. J Nurs Manag. 28(5): 59 64.
18. **Shabaan F. (1988).** Variables that induce hospital nurses to leave their jobsin governmental hospitals Unpublished Master Thesis. Cairo University. Faculty of nursing. P30**.**
19. **Sullivan J. & Deker p. (2005).** Effective leadership and management in nursing. 6th ed. U.S.A. Pearson Prentice Hall Comp. p.312-316.
20. **Tomey A. M. (2009).** Guide to nursing management and leadership. 8th ed. U.S.A. Mosby comp. p102-103
21. **Wolper L. (1999).** Health care administration. 3rd ed. U.S.A. Aspen Comp. p.312-316.
22. **Yousif M. (1999).** Study of absenteeism and turnover among hospital nurses. MSc. Thesis. Alexandria University. Faculty of Nursing.

العوامل المنبئة بترك الممرضات للعمل في المستشفيات الخاصة والمستشفى الجامعي الرئيسي بالمنصورة

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مقدمة:
يعتبر ترك الممرضات للعمل من المشاكل الخطيرة التي تواجه كل المستشفيات منذ وقت طويل، وزاد الاهتمام بهذه المشكلة عندما لوحظ أنها تسبب نقص في عدد هيئة التمريض، مما كان لهذا النقص أثره السلبي ليس فقط على كفاية هيئة التمريض الخاصة بالمستشفي ، وإنما كذلك على كيفية التواصل بين الممرضات، أدائهم الوظيفي، و إعطاء رعاية آمنة وفعالة.

هدف البحث:
يهدف البحث إلي تحديد العوامل المنبئة بترك الممرضات للعمل في المستشفيات الخاصة والمستشفي الرئيسي الجامعي بالمنصورة.

مكان إجراء البحث:
تم إجراء البحث في أربعة مستشفيات خاصة وهي: مستشفي الخير (٧٨ سرير)، والدلتا (٩٠سرير)، والحكمة (٣٠ سرير)، والزراعيين (٤٠ سرير)، بالإضافة إلى المستشفي الرئيسي الجامعي بالمنصورة (١٩٠٠ سرير).

عينة البحث:
أجري البحث علي عينة مكونة من ٢٦٠ ممرضة منهم ١١٤ من المستشفيات الخاصة و١٤٦ من المستشفي الرئيسي الجامعي بالمنصورة. تم أخذ كل الممرضات الموزعة بالمستشفيات الخاصة الحاصلين على دبلوم أو بكالوريوس تمريض مع سنة خبرة على الأقل، وهم كالأتي: ٤٢ من مستشفي الخير، ٢٨ مستشفي الدلتا، ٢٣ من الحكمة، ٢١ من الزراعيين بالإضافة إلي ١٤٦ من المستشفي الرئيسي الجامعي بالمنصورة.
تم تحديد العوامل التي قد تساعد في التنبؤ برغبة الممرضات لترك العمل باستخدام استمارة استبيان وتم تكوينها وتجميعها بالاستعانة بالمراجع ورأي الخبراء وتتكون هذه الاستمارة من جزأين ، الجزء الأول : يشتمل علي الصفات الشخصية والاجتماعية للممرضات، الجزء الثاني : يشتمل علي ٨ مجموعات مكونة من ٤٤ عنصر والتي تهدف إلي تحديد العوامل التي تنبئ بترك الممرضات للعمل.
تم قياس الاستجابة بناء علي مقياس معدل الخمس نقاط، وتم مراجعة الاستمارة من قبل ٥ من أعضاء هيئة التدريس بكليات التمريض، تم إجراء الدراسة التجريبية علي ٢٦ ممرضة من مستشفى الجامعة، تم اختيارها بشكل عشوائي واستبعدت من عينة البحث ، وتم تعديل بعض الأسئلة بناءً علي هذه الدراسة التجريبية واستغرق جمع البيانات شهرين من أول فبراير حتى نهاية مارس ٢٠١٠م.

نتائج الدراسة:
أسفرت الدراسة عن عدة نتائج ومنها:

- هناك فروق ذات دلالة إحصائية بين كل العوامل المنبئة بترك الممرضات للعمل في المستشفيات الخاصة والمستشفى الجامعي الرئيسي بالمنصورة.
- مجموع العوامل المنبئة بترك الممرضات للعمل أعلى في المستشفيات الخاصة عنه في المستشفى الجامعي الرئيسي بالمنصورة.
- الإشراف هو العامل الأول المنبأ بترك الممرضات للعمل في المستشفيات الخاصة وكذلك في المستشفي الرئيسي الجامعي بالمنصورة، بينما التقدم في الوظيفة هو المنبأ الأخير لترك العمل في المستشفيات الخاصة، والمرتب هو المنبأ الأخير لترك العمل في المستشفي الرئيسي الجامعي بالمنصورة.
- ترتيب العوامل المنبئة بترك الممرضات للعمل وهى الإشراف، العلاقات مع الآخرين، الحوافز، وسياسة وظروف العمل في المستشفيات الخاصة هي نفس ترتيبها في المستشفي الرئيسي الجامعي بالمنصورة.

- هناك فروق ذات قيمة احـصائية بـين العوامل النبئة بترك الممرضات للعمـل و البيانات الشخصية و الاجتماعية مثـل السن، المؤهل الدراسى و عدد سـنوات الخبرة، و هذا يعنى أن العوامل المنبئـة بترك الممرضات للعمل أعلى فى الأقل سنا عنه فى الأكبر،فى الحاصلين علـى بكالوريوس تمريض، و فى الممرضات الأقل من خمس سـنوات خبـرة عـن الأكثر من خمس سنواتخبرة.
- ليس هناك فروق ذات دلالـة احـصائية بين العوامل النبئة بتـرك الممرضـات للعمـ ـل و البيانـ ـات الشخـ ـصية و الاجتماعية و مكان السكن.

التوصيات:

- يجب على رؤساء هيئـة التمـريض أن يعملوا تجاه زيادة الحـوافز الملموسـة والغير ملموسة التي تقـدمها منظمـات الخدمات الصحية، وتشمل هذه المكافآت تقديم مرتبات و حوافز أفضل، خلق جو عمـل فيـه ود و مـساندة، الـسماح بالمشاركة فى اتخاذ القرار.
- يقوم رؤساء هيئة التمريض بتقديم برامج توعية للخريجين الجدد و التى تساعدهم على الانتقال من مرحلة كونهم طـلاب الى ممرضات يشغلون وظائف فعلية.
- يجب على رؤساء هيئـة التمـريض أن يكونوا على دراية باحتياج الممرضـات الى تحقيق انجازات فى عملهن، تحقيق الذات، الاحساس بالمسئولية، و التطور الوظيفى و ذلك حتـى يـسمحوا لهـن بحضور ورش عمل و بـرامج التعلـيم المستمرو لا يكونوا عقبة أمامهن.
- يقوم رؤساء هيئة التمريض بعمل جدول مقابلة منتظم مع الممرضات لفتح النقاش و الحفاظ على التواصل مع الممرضات و اعطـائهن الفرصـة للتعبيـر عـن مشاكلهن و خاصة المتعلقة بالعمل.

Study of Obesity among Primary School Children and its Association with their Dietary Habits and Level of Physical Activity

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Abstract

Increasing obesity prevalence and the significant health consequences of childhood obesity have made this a major emphasis as a public health concern. **The aim** was to study the Obesity and its relationship to both dietary habits and level of physical activity among primary school children. **Sample:** A simple random sample of 500 primary school children ranging between 6-12 years old and both gender ". **Tools:** 1) interview questionnaire including: demographic data of the students, family nutritional habits, child nutritional habits and data about participation in physical activities. 2) Biophysiologic measurement of weight and height to determine body mass index (BMI). **Results** The study revealed that the percentage of obese children was 13.8 % and the percentage of overweight children was 14% among the studied sample. Percentage of obesity was about three times in urban than in rural school children. Bad or unhealthy family and individual nutritional habits were associated with high percentage of obesity and overweight. In addition, sedentary activities were associated with high percentage of obesity and over weight. **Conclusion;** nutritional habits and decrease physical activities are variables that lead to obesity among primary school children. **Recommendations**: the parents should provide meals and snacks at regular times and don't allow his/her child to eat while watching television or doing homework. The curriculum should included lessons about the importance of good nutritional habits and physical activities.

Key words: Obesity, Primary school, Dietary Habits, Physical Activity

Introduction

Obesity in children is a significant and preventable public health problem. Science the 1970s, the number of overweight children has more than doubled for preschoolers from the ages 2-5 years and adolescents from ages 12-19 years. It has more than tripled for children 6-11 years **(Ogden et al., 2002).**

Obesity is defined as an excessive accumulation of body fat. Obesity is present when the total body weight is more than 25 percent fat in boys and more than 32 percent fat in girls (Jerry et al., 2009). Childhood obesity is a condition where excess body fat negatively affects a child's health or wellbeing **(Bessesen, 2008).**

The genetic and the individual factors are subject to influence, such as nutrition and physical activity, and the social conditions factors play both a direct as well as an indirect role in human metabolism and on behavior regarding energy intake and energy expenditure. Changes in the nutritional and physical activity habits are two important factors contributing to the rising prevalence of overweight and obesity **(Lobstein et al., 2004).**

Overweight children have a 70 percent chance of becoming overweight adults. Overweight children are already at risk for conditions once thought only to affect adults (like type 2 diabetes, high blood pressure, and high cholesterol) and, according to the study, the cruel treatment and social disadvantages associated with being overweight may have lasting, harmful effects on everything from kids' physical health to their education **(Mary & Gavin, 2007).**

Obesity in school children is already approaching 10% in industrialized countries. Countries with the highest prevalence of overweight are located mainly in countries of Middle East, Northern Africa., such as Morocco and Egypt, as well in some countries of the Caribbean and South America, thus, obesity can no longer be classified as a Western problem alone; it is now shared by many of developing countries **(De onis & Blossner, 2000; World Health Organization, 2002).**

Within the United Nations (UN) sub regions, the highest rate of overweight children was in North Africa (8. 1%), driven mainly by Algeria (9. 2%), Egypt (8. 6%), and Morocco (6. 8%). Southern Africa ranks second in the descending order of prevalence (6. 7%), through a national survey conducted in 1995 **(World Health Organization, 2002).**

As educators and health promoters, nurses have a responsibility to educate families about childhood obesity and its associated health risks and complications. Parents and children need to be taught about proper nutrition and the need for physical activity as well as the potentially harmful effects of sedentary activities such as excessive TV watching, video game play, and computer usage. As part of the education process, nurses should also assist families in formulating a plan to combat obesity and increasing their child's activity level would be effective in controlling weight **(Myers and Vargas, 2000).**

Aim of the study

The aim was to study the obesity among primary school children and its relationship to both dietary habits and level of physical activity among primary school children.

Hypothesis:

1. Primary school children in urban schools may be more likely to be obese than ones in rural schools.
2. Students with unhealthy nutritional habits may be more obese than students eat healthy foods.
3. Inactive students may be more obese than active ones.

Subjects and Method

Research design: An exploratory descriptive design to carry out the study.

Setting:

The multi stage random sample was used to select the appropriate setting. This study was carried out on four governmental primary schools that were agreed to conduct the study there. "two from Sheben Elkom city as an urban area namely Saad El Hora primary school and El Salam primary school of a total ten schools and two from two villages as a rural areas namely Mohamed Anour ElSadat primary school and El Nahda El Eslameia primary school"; because each village has one primary school. The total numbers of pupils in those schools were 3000 pupil.

Subjects:

The inclusion criteria of the children were Age 6-12 years, both genders and

had no chronic diseases and physical disability.

Sample:

Systematic simple random sample was used to select 500 pupils from the above mentioned four schools. First, we select one class from each grad, and then select the pupils from a class list of student's names. The total number of pupils in each school was: Saad El Hora primary school (800), El Salam primary school (1000), Mohamed Anour El Sadat primary school (600) and El Nahda El Eslameia primary school (600). Each class had 45-50 pupils, 125 pupils were randomly selected from each school represent the six grades and we put in consideration the numbers of male approximately equal the numbers of female pupils.

As emphasized by Creative research survey, (2010) the sample size of this study was calculated to be 500 at confidence level "(95%) and confidence interval (4)".

Tools:

(1) ***An interviewing questionnaire*** developed by **Schaeffer, (2007)** and modified by the researcher which including the following:

Part I: demographic data of the students such as age, school name, father education, mother education, father occupation, mother occupation.). **Part II:** general statements regarding the student family nutritional habits. **Part III:** data regarding the student's nutritional habits. **Part IV:** data about participation in physical activities.

(2) ***Biophysiologic measurements tool;*** weight was measured in kilograms (Kg). Height was measured in centimeter Cm. by using a measuring tape. The BMI was estimated by dividing weight in kilogram by squared height in meters [BMI = weight (kg)/height (m) ^{2}]. Classification of BMI was obtained through plotting the student BMI and age in Body mass index for age percentile for Egyptian boys, 2 to 21 years and body mass index – for- age percentile for Egyptian girls, 2 to 21 years charts **(Cairo University, 2002).**

Obesity were diagnosed in children whose BMI-for-age percentile were equal to or greater than 95th percentile, over weight were diagnosed in children whose BMI- for-age percentile were from 85th percentile and less than 95th percentile, normal weight were diagnosed in children whose BMI-for-age percentile were from3rd percentile and less than 85th percentile and underweight were diagnosed in children whose BMI- for-age percentile were less than 3rd percentile.

It was reviewed by experts in the different fields of nursing and medicine to test the content validity. Reliability was applied for testing the internal consistency of the tool. It is the administration of the same tools to the same subjects under similar conditions on one or more occasions. Answers from repeated testing were compared.

Pilot study:

A pilot study was conducted on 50 students to evaluate the applicability, clarity and time required to fill the questionnaire. Appropriate modifications were done prior to data collection for the actual study. This sample was excluded from the study.

***Administrative & Ethical Considerations*:**

Written Approval for data collection was obtained after the researcher explained the objectives of the study to each headmaster of each school and a

copy of the questionnaire was given. Each student was interviewed individually after explaining the purpose of the study and obtaining his / her approval to participate in the study and they were assured about confidentiality.

Field work:

Each interview took approximately 15-20 minutes to complete filling the questionnaire, depending upon the understanding and response of the students. After that measurements of weight and height were taken. Data were collected during the period from the 1st of February to May 2009

Statistical analysis of data:

After data were collected, they were coded and transferred into specially design format to be suitable for computer feeding in. The Statistical Package for Social Science (SPSS), version 12 was utilized for data analysis and tabulation. All the entered data were manually verified for the errors. Mean, Standard deviation, Chi square and Fisher exact test (if expected value of Chi square test was less than 5) were used .The P- value < 0.05 was used as the cut of value for statistical significance.

Results

Table (1) reveals that the mean age of over weight was (8.51 ± 1.63) compared to mean age of normal weight (8.99 ± 1.54) the differences was statistically significance P < 0.05.Regarding mother job, more than half (62.9%) of over weight children their mother's were housewife compared to (59.8%) of normal weight, the differences was not statistically significance P > 0.05. Regarding gender, there was no statistical significance differences between boys and girls related to BMI.

Table (2): This table shows that the percentage of obesity was more than fourth (27.6 %) among studied sample. In urban schools was about three times (20.4%) than in rural ones (7.2%).the differences was statistically significance P < 0.05

Table (3): This table reveals that there was high statistical significance between body mass index and how many times a week they purchase fast foods to eat at home as 7.2 % in obese purchase fast foods to eat at home 5-7 times a week compared with 0.8 % in normal weight. Also there was statistical significance between body mass index and how many times a week the family ate package boxed food (17.4%) in obese ate package boxed food 8-10 times a week.

Table (4): It illustrates that there was high statistical significance between body mass index and the number of times in atypical week the children taken fresh fruits for snakes (44.9%) of obese children taken fresh fruits for snakes only 0-1 times in atypical week. Also there was high statistical significance between body mass index and the number of times in atypical week the students cut down the amount of fatty foods they ate (47.1% in over weight & 43.5% in obese) cut down the amount of fatty foods they ate from 0-1 times in atypical week.

Table (5): revealed that, (72.9%) of over weight compared to (54.5) of normal weight were eating a lot of chips and crisps. This table also shows that there was high statistical significance regarding body mass index and if the students usually take breakfast (50.7%) of obese didn't usually taken breakfast, while 21.9% of normal weight didn't usually taken breakfast. It indicated also that there was high statistical significance between body mass index

and soda consumption (60.9% in obese increase soda consumption.

Table (6): illustrated that there was high statistical significance between body mass index regarding the number of hours they participated in outdoor active play in atypical week, (49.3%) of obese children didn't participated in indoor or outdoor active play compared to (14.3%) of normal weight children.

Figure (1): distribution of body mass index (BMI) percentile categories among studied sample. This figure shows that about two thirds of the study sample 71.2% was of normal weight, while 27.8% of the sample was obese and overweight and only 1% of the sample was underweight.

Figure (2): This figure shows that eating with family at home a food that were prepared at home is more apparent in rural than in urban areas 94 % of rural children eats with family at home a food that were prepared at home 8-10 times a week compared with 79 % of urban ones) .

Figure (3): this figure shows that rural children ate more times of fresh vegetables for snake than do urban ones. As 50.8 % in rural schools have taken fresh vegetables for snakes 6 or more times in atypical week compared with 26.0 % of urban ones.

Discussion

Obesity is a public health problem worldwide with significant adverse health outcomes. It has been proposed as the most frequent cause of preventable deaths after smoking **(World Health Organization, 2002).**

The results of the current study revealed that the percentage of obesity among studied sample was 13.8% and over weight or high risk to be obese was 14% (fig.1) which higher than those of the national study, as **Tawfik, Hathout & Shaheen (2003)** who revealed that the overall prevalence of over weight and obesity for children 6-11 years was 9.4% among girls and 6.8% among boys. While the result of the current study was lower than results of **Daabis, (2006)** in Damanhour city in El Beheira governorate who demonstrated that the prevalence of obesity was 19.8% and the prevalence of overweight was 17.2%. On the other hand results of the current study were lower than those of the study in Kuwait **WHO, (2003)** which 36% of the school aged children were found to be overweight or obese. This discrepancy may be due to cultural factors related to diet. Regarding the gender the overall prevalence of overweight and obesity was 13.4% in boys and 13.8 in girls (table 1). These results were in agreement with **Stojannovic** and **Blojevic (2009)** in Serbia, they found that there was no significant difference of body mass index between boys and girls.

Regarding the occurrence of obesity in urban and rural areas, the current study revealed that percent of obesity in urban schools was near to be triple than in rural schools (table 2). This result was supported by **Torres et al., (2007)** who found that the prevalence of obesity and overweight was increased in urban versus rural children. In addition, **Peytremann - Bridevaux, Faeh** and **Santos-Eggimann (2007)** found no differences in the prevalence of overweight and obesity between rural and urban areas. The discrepancy between those results were attributed to that there are many factors that contribute to the prevalence of obesity. Sex is one of these factors; female obesity is more prevalent and, thus, has greater epidemiological importance. The present study was not in agreement with this fact where girls were found to have nearer rates of overweight and obesity to boys. The overall prevalence of overweight and obesity was 13.4% in

boys and 13.8% in girls (Table1). These results were close to the results of the study of **Stojanovic & Belojevic, (2009)** in Serbia, they found the there were no significant difference in BMI between boys and girls.

Maternal or paternal education level, has been shown in several studies to exhibit an inverse relationship with childhood overweight **Lamerz et al., 2005** and **Huerta et al., 2006).** In the current study there were no statistical significance between father and mother education and BMI of there children, (table 1). These figures are close to figures of **Daabis, (2006).** This can be explained by the fact that the highly educated parents can get better chances for work and consequently a persistent source of money. The higher domiciliary income the family gains from parent's work increases their purchasing power, which may be directed mostly towards food in addition to the more sedentary style of living as a result of Westernization in these transitional communities **(Doak et al., 2002).**

Father's occupation and mother's employee status are other social factors that were found to influence the prevalence of overweight and obesity. Private work fathers had the highest level of overweight and obese children (table 1); this may be because those fathers had enough money which may be directed to buy food and other sedentary styles of living. While house wife mothers recorded the highest percentage of having obese and high risk to be obese children (table 1). This can be explained by the fact that house wife mothers have enough time to make more and more delicious foods and sweet dishes that make her children eat more and more. While, working mothers don't have enough time to prepare such dishes. These results comes in contrast to **Daabis , (2006)** who found that the children of working mothers had higher levels of overweight and obesity than those of non-working mothers.

Regarding the rural and urban school children in eating with the family a food that were prepared at home the current study revealed that there were high statistical significant difference between rural and urban primary school students that the number of times a week the family eat together were less in urban than in rural schools (Fig. 2).This can be linked to that more mothers in rural areas are a house wives and have the time to prepare food at home than working urban mothers. Also, and all farmers usually take breakfast early before children going to school , and the presence of grandparents within the rural families (extended family) make all the family members eat most meals together.

Fast food generally has a high energy density, which, together with large portion sizes, induces over consumption of calories **(Stender et al., 2007).** The current study demonstrated that there was a significant difference between fast foods and children's BMI, as about 3% in obese and overweight take fast foods 5-7 times per week while only 0.6% in normal weight takes fast foods 5-7 times per week (Table 3). This comes close to **Schaeffer, (2007)** who found that there were a significant relationship between the increased BMI percentile and the number of times the family dine away from home, the more times the family dine away from home the higher the child's BMI percentile. This comes in agreement with **Hendricks, Olson** and **Macalalad, (2005)** who found that children who eat out frequently are more likely to be overweight.

Concerning the number of times per week the family eat packaged boxed foods, the current study reveled that there were a significant correlation

between children BMI and the number of times the family ate packaged boxed food per week, 59% in overweight and obese children their families eat packaged boxed food 5-7 times a week and 30.3% in overweight and obese children their families eat packaged boxed food 8-10 times a week (table 3). This is super rising since **Schaeffer, (2007)** found that only about 12% in overweight and obese children families eat packaged boxed food 5-7 times a week and 0% of them eat packaged boxed food 8-10 times a week.

Concerning the rural and urban primary school children, the current study reveled that there were a high significant difference between rural and urban primary school students, that the number of student who take fresh vegetables for snakes 6 or more times a week in rural schools was near to be doubled than in urban schools, and also the number of student who take fresh fruits for snakes 6 or more times a week in rural schools was about 1.5 times than in urban schools (Fig. 3). This result comes in contrast with **Davis et al., (2008)** who concluded that urban school children consumed more vegetable and fruit servings than rural school children. This discrepancy can be explained by tradition that many people who live in rural areas have agricultural land and many of them farming vegetables or fruits or both which make it easy for their children to have fresh vegetables or fruits at any time.

Regarding to cutting down the amount of fatty foods the child eat in atypical week, the results of the current study showed an inversely relation as the more times the child cut down the amount of fatty foods eaten per week the less the risk to be obese and overweight (table 4). These results comes in agreement with **Maffeis et al., (2001)** who reported that fat content in the diet is a promoting factor of energy intake and though weight gain.

Concerning eating while the child watching TV., the results of the current study indicated that all the under weight children were ate while watching TV this may be due the small number of children who were underweight in the current study only 1% of the total study sample. While the highest percentage 94.2% of children who eat while watching TV from the remaining part 99% were among those who were obese (table 5). These results comes in agreement with **Matheson et al., (2004)** whose findings support the assumption that eating while watching television is a potential mechanism linking television viewing to obesity. This can be explained as the number of eating meals or snakes in front of television increased, the total viewing time for television increased. That lead to decrease level of activity and increase amount of food eaten which all lead to weight gain. While the present study finding in contrast with **vandewater, Shim** and **Caplovitz (2004)** who indicated that there was no relation between children's weight and television viewing.

Regarding the correlation between eating a lot of candy foods and the child's BMI, the present study indicated that the highest percentage of children who eat a lot of candy foods were found among overweight and obese (table 5). These results agree with **Pinhas-Hamiel, et al., (2009)** who found that Overweight children reported that they prefer eating candies.

Regarding the soda consumption and children's BMI the current study found that the highest percentage of children who increase soda

consumption were obese children, as it was one and half times of normal weight (Table 5). These results came in close to **Bray, Nielsen** and **Popkin (2004)** who reported that a child's risk for obesity increases an average of 60 percent with every additional daily serving of soda.

Regarding the relation between taking breakfast at a regular basis and the child BMI, the current study revealed that the percentage of children who usually skipping breakfast were high in obese children than in normal weight (table 5). This results supported by **Maddah et al., (2009)** who found that prevalence of overweight and obesity was significantly high in those who usually skipped breakfast**.**

Concerning the time spent in indoor and outdoor active play and children's BMI, the current study found that The greater the number of hours spent by children in indoor and outdoor active play, the lower rate of obesity they were and vice versa, (table 6). These results came in agreement with **Bullet, (2008)** who reported that increase the outdoor and indoor active play time help to prevent and reduce overweight and obesity in children.

Regarding correlation between the time spent in walking to or from school or any other place and children's BMI, the current results showed that normal weight children were more walking than overweight and obese children (table 6). The researcher view that walking help children to get rid of extra energy they have and offset their inability to engage in other activity due to lake of time to do that. This result comes in agreement with **Cooper et al., (2003).**

Regarding the child participated in physical activities at school and the child's BMI; the current study finding indicated that overweight and obese children were less likely to participate in physical activities at school (table 6).This results supported by **Sallis et al., (2003).** Who reported that increase school physical activity was effective in reducing the increase in BMI.

Conclusion:

It is concluded that the occurrence of obesity among studied sample was 13.8% and over weight or high risk to be obese was 14%. The highest percentages of obesity were found in urban school than in rural ones. Also family nutritional habits, Child's individual nutritional habits and decrease of physical activity among studied sample were the cause of obesity.

Recommendations for parents

- Provide meals and snacks at regular times.
- Don't allow their child to eat while watching television.
- Teach and encourage their children to eat healthy food and physical activity to be as a part of their life style.

Recommendations for school personnel:

- Be an advocate of healthy eating in school. If your students have to purchase soda and candy at school, work with administration and parents to limit, and put options to more value drinks as water or juice, milk, and healthier snacks.
- Incorporate nutrition education lessons into the curriculum.
- The weight and height screening should be done for the students every year.

Table (1): Distribution of the studied sample Body mass index according to their socio-demographic characteristics.

Socio demographic data	BMI								Test of significant	P - value
	Obese (n=69)		Overweight (n=70)		Normal weight (N=356)		Underweight (n=5)			
	No.	%	No.	%	No.	%	No.	%		
Age in years	**Mean ± SD** 8.68 ± 1.47		**Mean ± SD** 8.51 ± 1.63		**Mean ± SD** 8.99 ± 1.54		**Mean ± SD** 7.4 ± 1.14		F test. 3.79	< 0.05
Gender										
• Male	32	46.4	35	50.0	177	49.7	3	60.0	X^2 0.59	> 0.05
• Female	37	53.6	35	50.0	179	50.3	1	40.0		
Place of habitation										
• Rural	185	26.1	24	34.3	206	57.9	3	60.0	X^2 31.7	< 0.01
• Urban	1	73.9	46	65.7	150	42.1	2	40.0		
Level of father education										
• Illiterate	4	5.8	3	4.3	16	4.5	0	0.0	X^2 4.57	> 0.05
• Elementary education	8	11.6	9	12.9	59	16.6	1	20.0		
• Secondary education	29	42.0	26	37.1	115	32.3	1	20.0		
• University education	28	40.6	32	45.7	166	46.6	3	60.0		
Father job										
• Worker	10	14.5	10	14.3	45	12.6	1	20.0	X^2 9.21	> 0.05
• Employee	7	10.1	7	10.0	40	11.2	0	0.0		
• Private work	27	39.1	36	51.4	182	51.1	3	60.0		
• Others	25	36.2	17	24.3	89	21.3	1	20.0		
Level of mother education										
• Illiterate	8	11.6	11	15.7	46	12.9	1	20.0	X^2 6.64	> 0.05
• Elementary education	12	17.4	6	8.6	50	14.0	1	20.0		
• Secondary education	29	42.0	31	44.3	143	40.2	0	0.0		
• University education	20	29.0	22	31.4	117	32.9	3	60.0		
Mother job										
• Housewife	38	55.1	44	62.9	213	59.8	1	20.0	X^2 10.02	> 0.05
• Worker	31	44.9	26	37.1	143	40.2	4	80.0		

Table (2): Differences between Rural and Urban School Regarding Children BMI.

Body mass index	Schools				Test of significance	P-value
	Urban (n=250)		Rural (n=250)			
	No.	%	No.	%		
Obese	51	20.4	18	7.2	X^2 test: 33.02	< 0.01
Overweigh	47	18.8	23	9.2		
Normal weight	150	60.0	206	82.4		
Under weight	2	0.8	3	1.2		

Table (3): Distribution of Body Mass Index according to Reported Family Nutritional Habits among Studied Sample.

Family nutritional habits in atypical week	BMI								X^2 test	P= value
	Obese (n= 69)		Overweight (n=70)		Normal weight (n=356)		Under weight (n=5)			
	No.	%	No.	%	No.	%	No.	%		
Eating with your family the food prepared at home										
2-4 times	2	2.8	0	0.0	7	1.9	0	0.0	1.9	> 0.05
5-7 times	67	97.2	70	100.0	349	98.1	5	100.0		
Dining away from home										
0-1 times	50	72.5	53	75.7	314	88.2	5	100.0	16.35	< 0.05
2-4 times	18	26.1	16	22.9	40	11.2	0	0.0		
5-7 times	1	1.4	1	1.4	2	0.6	0	0.0		
Purchasing fast foods										
0-1 times	52	72.7	52	74.3	322	90.5	5	100.0		
2-4 times	12	26.1	16	22.9	31	8.7	0	0.0	27.74	< 0.01
5-7 times	5	7.2	2	2.8	3	0.8	0	0.0		
Eating package boxed food										
0-1 times	14	20.3	12	17.1	101	28.4	1	20.0		
2-4 times	23	33.3	28	40.0	131	36.8	0	0.0	19.16	< 0.05
5-7 times	20	29.0	21	30.0	99	27.8	4	80.0		
8-10 times	12	17.4	9	12.9	25	7.0	0	0.0		

Table (4): Distribution of Body Mass Index by Reported Individual Nutritional Habits among Studied Sample.

Individual nutritional habits in atypical week	BMI								X^2 test	P= value
	Obese (n=69)		Overweight (n=70)		Normal weight (n=356)		Under weight (n=5)			
	No.	%	No.	%	No.	%	No.	%		
Taking fresh fruits for snakes										
0-1 times	31	44.9	19	27.1	49	13.8	1	20.0	63.84	< 0.01
2-3 times	26	37.7	30	42.9	95	26.7	1	20.0		
4-5 times	4	5.8	6	8.6	63	17.7	1	20.0		
6 or more times	8	11.6	15	21.4	149	41.9	2	40.0		
Taking fresh vegetables for snakes										
0-1 times	29	42.0	25	35.7	59	16.6	1	20.0	56.43	< 0.01
2-3 times	20	29.0	26	37.1	77	21.6	1	20.0		
4-5 times	11	15.9	6	8.6	52	14.6	1	20.0		
6 or more times	9	13.1	13	18.6	168	47.2	2	40.0		
Cutting down the fatty foods.										
0-1 times	30	43.5	33	47.1	86	24.2	1	20.0		
2-3 times	18	26.1	15	21.4	77	21.6	1	20.0	30.78	<0.01
4-5 times	6	8.7	2	2.9	50	14.0	0	0.0		
6 or more times	15	21.7	20	28.6	143	40.2	3	60.0		

Table (5): Continued Distribution of Body Mass Index by Reported Individual Nutritional Habits among Studied Sample.

General individual nutritional habits	BMI									
	Obese (n= 69)		Overweight (n=70)		Normal weight (n=356)		Under weight (n=5)		X^2 test	P= value
	No.	%	No.	%	No.	%	No.	%		
Eating during watching television										
Yes	65	94.2	61	87.1	264	74.2	5	100.0	19.64	< 0.05
No	4	5.8	9	12.9	92	25.8	0	0.0		
Eating during doing homework										
Yes	31	44.9	33	47.1	60	16.9	3	60.0	48.23	<0.01
No	38	55.	37	52.9	296	83.1	2	40.0		
Eating when you are not hungry										
Yes	37	53.6	27	38.6	84	23.6	2	40.0	27.9	<0.01
No	32	46.4	43	61.4	272	76.4	3	60.0		
Eating a lot of candy										
Yes	44	63.8	50	71.4	170	47.8	1	20.0	18.88	<0.01
No	25	36.	20	28.6	186	52.2	4	80.0		
Eating a lot of chips and crisps										
Yes	45	65.2	51	72.9	194	54.5	2	40.0	10.27	< 0.05
No	24	34.8	19	27.1	162	45.5	3	60.0		
Taking breakfast										
Yes	34	49.3	35	50.0	278	78.1	4	80.0	38.92	<0.01
No	35	50.7	35	50.0	78	21.9	1	20.0		
Drinking more soda										
yes	42	60.9	39	55.7	138	38.8	1	20.0	17.24	<0.01
No	27	39.1	31	44.3	218	61.2	4	80.0		

Table (6): Distribution of Body Mass Index among Studied Sample by Reported Physical Activity Participation in a Typical Week.

Physical activity participation in a typical week	BMI								X^2 test	P= value
	Obese (n=69)		Overweight (n=70)		Normal weight (n=356)		Under weight (n=5)			
	No.	%	No.	%	No.	%	No.	%		
participating indoor & out door activities										
1-3	62	89.9	49	70.0	158	44.4	3	60.0	78.5	<0.01
4-6	4	5.8	15	21.4	92	25.8	0	0.0		
7-9 or more hours	3	4.3	6	8.6	106	29.8	2	40.0		
Walking to or from school or to any other places										
1-3	54	78.3	45	64.3	119	33.4	3	60.0	71	<0.01
4-6	14	20.3	15	21.4	97	27.3	1	20.0		
7-9 or more hours	1	1.4	10	14.3	140	39.3	1	20.0		
Participating in physical activities at school										
1-3	9	13.0	43	61.4	118	33.2	1	20.0	75.7	> 0.05
4-6	46	66.7	25	35.7	167	46.9	4	80.0		
7-9 or more hours	14	20.3	2	2.9	71	19.9	0	0.0		
Watching TV										
1-3	6	8.7	10	14.3	147	41.3	1	20.0	59.61	<0.01
4-6	11	15.9	8	25.7	86	24.2	2	40.0		
7-9 or more hours	52	75.4	42	60.0	123	34.6	2	40.0		
Playing video games or computer										
1-3	21	30.4	27	38.6	273	76.6	3	60.0	121.4	<0.01
4-6	7	10.1	14	20.0	58	16.4	1	20.0		
7-9 or more hours	41	59.5	29	41.4	25	7.0	1	20.0		

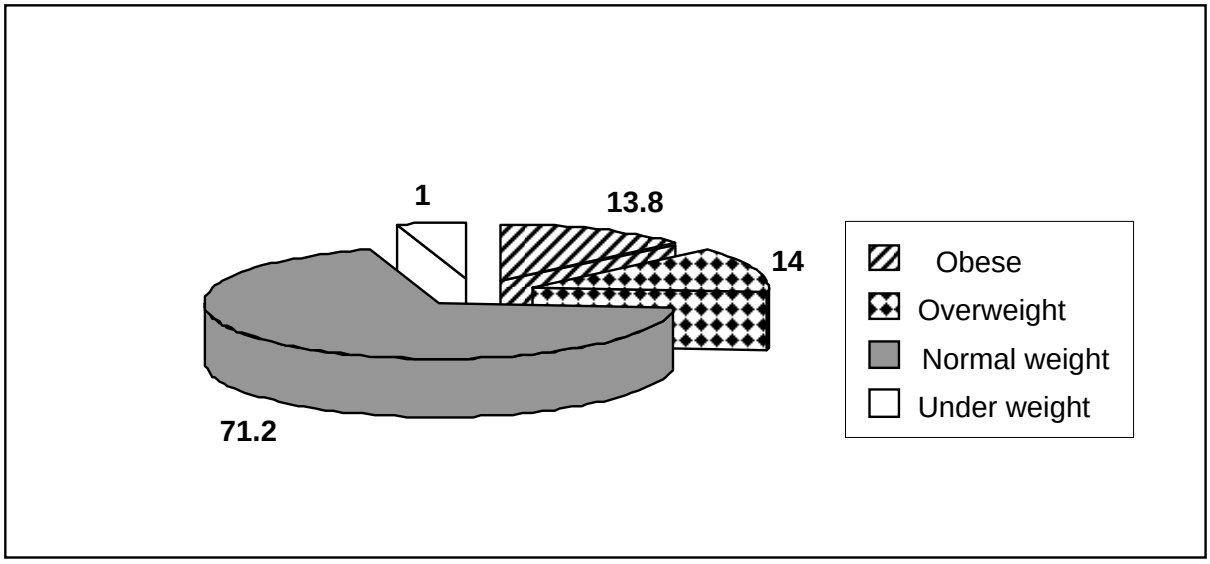

Figure (1): Distribution of Body Mass Index (BMI) Percentile Categories among Studied Sample

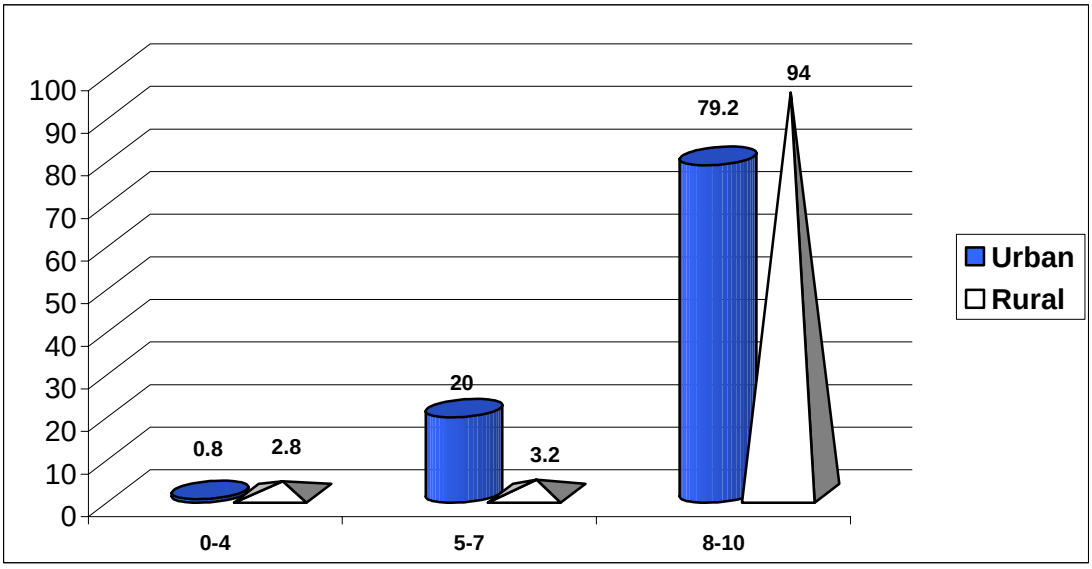

Figure (2): Differences Between Urban and Rural Regarding How Many Times a Week We Eat Together at Home (Food That Was Prepared At Home).

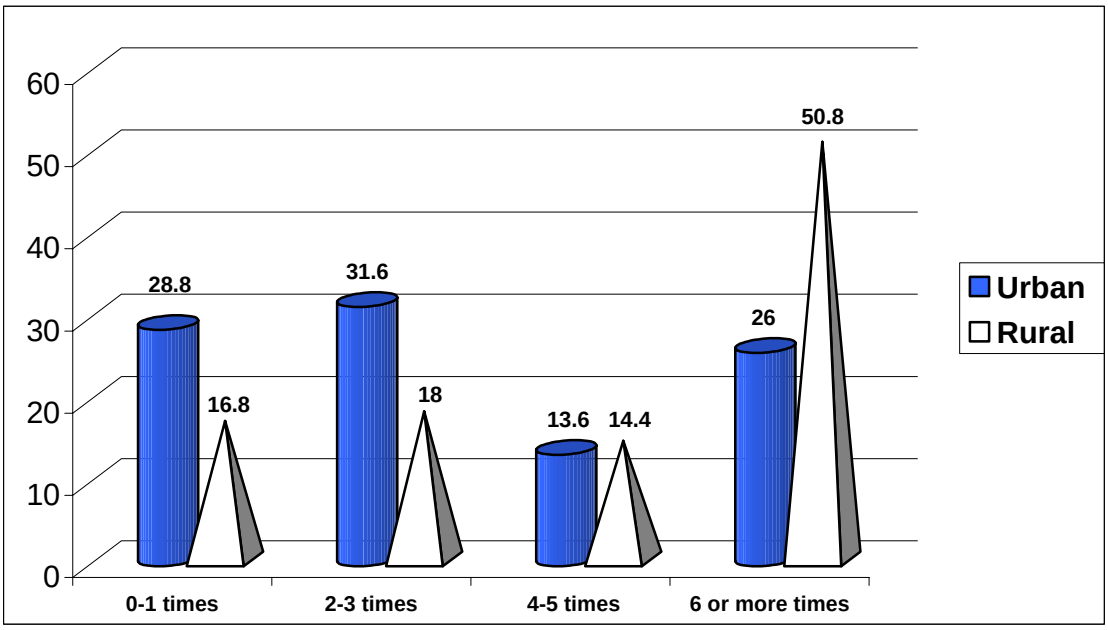

Figure (3): Differences Between Students at Urban And Rural Schools regarding How Many Times Have You Taken Fresh Vegetables for Snakes hn a typical Week.

References:

1. **American association for public opinion research, (2010)** Creative Research Systems www.surveysystem.com/sscalc.htm
2. **Bessesen DH (2008):** "Update on obesity". J. Clin. Endocrinol.Metab. 93 (6): 2027–34.
3. **Bray GA, Nielsen SJ and Popkin BM. (2004):** Consumption of High-fructose corn syrup in beverages may play a role in the epidemic of obesity. Am J Clin Nutr.; 79(4):537–543.
4. **Bullett A, Y. (2008):** A Physical Activity Playgroup Intervention with 2-4 Year Old Children and their Parents to Increase Parent Awareness of Childhood Overweight Prevention in a Maine WIC Setting.
5. **Cairo University, (2002).** Diabetic Endocrine and Metabolic Pediatric Unit and the National Research Center-Cairo. In collaboration with Wright State University- School of Medicine- Department of Community Health lifespan. Health Research Center.
6. **Cooper A R., page A S.,Fostr L J. & Qahwaji D. (2003**): Commuting to school: Are children who walk more physical active? American Journal of Preventive Medicine. Vol. 25, Issue 4, p. no 273-276.
7. **Daabis, AM. (2006):** The prevalence of obesity and its determinants among primary school children in damanhour city. Master thesis. Faculty of medicine. Alexandria University.
8. **Davis AM, Boles RE, James RL, Sullivan DK, Donnelly JE, Swirczynski DL & Goetz J. (2008):** Health behaviors and weight status among urban and rural children. Rural Remote Health Journal. 8(2): 810.
9. **DE Onis M & Blossner M. (2000):** Prevalence and trends of over weight among pre- school children in developing countries. Am J Clin Nut.; 72(4):1032-9.

10. **Doak C, Adair L, Bentley M, Fengying Z & Popkin B. (2002):** The under-weight/overweight household: an exploration of household socio-demographic & dietary factors in china. Public Health Nutr; 5: 215-21.
11. **Hendricks B, Olson K & Macalalad D. (2005):** Study links dining out, health risks. Supplement II, circulation, 172(17), 3653-3654.
12. **Huerta M, Bibi H, Jacob H, Scharf D & Michael G. (2006):** Parental Smoking and Education as Determinants of Overweight in Israeli Children. Centers for disease control.
13. **Lamerz A, Kuepper-Nybelen J, Wehle C, Bruning N, Trost-Brinkhues G & Brenner H, et al., (2005):** Social class, parental education, and obesity prevalence in a study of six-year-old children in Germany. Int J Obes (Lond); 29 (4):373–380.
14. **Lobstein Lobstein, T; Baur, L; Uauy, R and IASO, et al., (2004):** T. Childhood obesity working group obesity in children and young people: a crisis in public health. Report to the World health organization, Obesity Rev. 5 (Suppl.1) (2004), pp. 4–85.
15. **Maddah M, Rashidi A, Behnoush Mohammadpour B, Vafa R & Karandish M. (2009):** school Snacking, Breakfast Consumption, and Sleeping Patterns of Normal and Overweight Iranian High School Girls: A Study in Urban and Rural Areas in Guilan, Iran,.Jornal of nutrition education and behavior. 41(1), 27-31.
16. **Maffeis C, Schutz Y, Grezzani A, Provera S, Giorgio Piacentini G, & Tatò L. (2001):** Meal-Induced Thermogenesis and Obesity: Is a Fat Meal a Risk Factor for Fat Gain in Children. The Journal of Clinical Endocrinology & Metabolism Vol. 86, No. 1 214-219.
17. **Mary L & Gavin M D. (2007):** Carbohydrates, sugars and your child. Kids Health Located at:- http://kidshealth.org/-parent/nutrition_fit/nutrition/sugar.html#
18. **Matheson, D.M., Killen, J.D., Wang, Y., Varady, A., & Robinson, T.N. (2004):** Children's food consumption during television viewing. American Journal of Clinical Nutrition, 79, 1088-1094.
19. **Myers S and Vargas Z. (2000):** Parental perceptions of the preschool obese child. Pediatric Nursing. 26(1), 23-34.Retrieved November 29, 2006. In proquest database**.**
20. **Ogden CL, Flegal KM, Carroll MD and Johnson CL. (2002):** Prevalence and trends in overweight among US children and adolescents, 1999-2000. JAMA. 288:1728-32.
21. **Peytremann-Bridevaux I, Faeh D & Santos-Eggimann B. (2007):** Prevalence of overweight and obesity in rural and urban settings of 10 European countries. Preventive medicine.
22. **Pinhas-Hamiel O. , Bar-Zvi E. , Boyko V. , Reichman B.M & Lerner-Geva L. (2009):** Prevalence of overweight in kindergarten children in the center of Israel: Association with life style habits . Child care , Health and development, 35,147-152
23. **Sallis, J. F., McKenzie, T. L. & Conway, T. L., et al (2003):** Environmental interventions for eating and physical activity: a randomized controlled trial in middle schools. Am J Prev Med. **24**: 209–217.
24. **Schaeffer C. (2007):** A study of the influences of nutrition, activity, income, and family life style choices on the overweight of elementary-age children. Doctor thesis of education/ Philosophy degree in leadership

for the advancement of learning and service. College of education. Cardinal stritch University.

25. **Stender S, Dyerberg J & Astrup A. (2007):** Fast food: unfriendly and unhealthy. Inter J Obesity; 31: 887–890
26. **Stojanovic D & Belojevic G. (2009):** Prevalence of obesity among children aged 6–12 years in South-East Serbia. Journal compilation © 2009 International Association for the Study of Obesity. Obesity reviews 10(3), 262–264.
27. **Tawfik AA, Hathout MH & Shaheen MF. (2003):** Prevalence of obesity in Egypt. Bull HIPH.; 33 (4):895-926.
28. **Torres MD, Carmona I, Campillo C, Pérez G & Campillo E. (2007):** Breakfast, plasma glucose and -hydroxybutyrate, body mass index and academic performance in children from Extremadura, Spain. Nutr. Hosp. v.22 n.4.
29. **Vandewater, E. A, Shim, M. S., & Caplovitz, A. G. (2004):** Linking obesity and activity level with children's television & video game use. J. of Adolescence, 27. 71-85.
30. **World Health Organization (2003).** Global strategy on diet, physical activity and health: Eastern Mediterranean regional consultation meeting report Cairo.30 April- 2 May.
31. **World Health Organization. (2002):** Obesity: Preventing and managing the global epidemic. Technical Report Series, No 894. WHO.

دراسة السمنة بين أطفال المدارس الإبتدائية وعلاقتها بكل من عاداتهم الغذائية ومستوى النشاط البدنى لديهم

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المقدمة :
لقد أصبحت السمنة أو البدانة من أبرز المشاكل التى تواجه الأطفال في وقتنا الراهن .فقد زادت التحذيرات من السمنة التي قد ينظر إليها الكثيرون على أنها أمر بسيط، إلا أنها تعد من الأمراض الخطيرة .فقد حذر المركز العربي للتغذية من تفاقم السمنة عند الأطفال في دول مجلس التعاون الخليجي، مؤكدا على أن الإصابة بالسمنة عند أطفال المدارس وصلت إلى مرحلة متقدمة، حيث وصلت إلى ٢٠ و ٢٧ في المائة من تلاميذ المرحلة الابتدائية وما بين ٢٨- و ٣٥ في المائة من تلاميذ المرحلة الإعدادية ونحو ٣٥ في المائة في المرحلة الثانوية.

هدف البحث:
يهدف البحث إلى دراسة السمنة وعلاقتها بكل من العادات الغذائية ومستوى النشاط البدني لدى أطفال المدارس الابتدائية.

افتراضات البحث:
١. الأطفال الغير نشيطين بدنيا ربما يكونوا عرضة للسمنة عن الأطفال النشيطين.
٢. الأطفال الذين لديهم عادات غذائية سيئة مثل زيادة كمية الطعام أو تناول الأطعمة التي تحتوى على نسبة عالية من السعرا الحرارية ربما يكونوا عرضة للسمنة.
٣. أطفال المدارس الابتدائية في المدن ربما يكونوا عرضة للسمنة عنهم في القرى.

طرق البحث-:
تصميم البحث :
دراسة وصفية لتحديد نسبة السمنة لدى أطفال المدارس الابتدائية وعلاقتها بكل من عاداتهم الغذائية ومستوى النشاط البدني لديهم.

مكان إجراء البحث: :
أجرى هذا البحث في أربع مدارس ابتدائية، مدرستين من الناطق الحضرية وهما مدرسة سعد الحرة الابتدائية المشتركة و مدرسة السلام الابتدائية المشتركة و مدرستين من المناطق الريفية وهما مدرسة أنور السادات الابتدائية المشتركة .وكان العدد الإجمالى للتلاميذ فى هذه المدارس ٣٠٠٠ تلميذ.

العينة :
أجرى هذا البحث على عدد ٥٠٠ تلميذ و تلميذة في المرحلة الابتدائية.

أدوات البحث:
١. استمارة استبيان تشتمل على بيانات ديموغرافية، اقتصادية اجتماعية، العادات الغذائية و النشاط البدني.
٢. قياس **وزن** الطفل وطوله لحساب مؤشر كتلة الجسم للأطفال باستخدام ذات الأسلوب المتبع مع البالغين، أي الوزن بالكيلوغرام مقسوما على مربع الطول بالمتر، ووضعها على الرسوم البيانية الخاصة بالعمر و النوع و نسبة كتلة الجسم للأطفال المصريين .

وقد خلصت الدراسة الي النتائج الأتية:
- عدم وجود دلالة إحصائية بين الإناث و الذكور من أفراد العينة بالنسبة لمؤشر كتلة الجسم.
- أن نسبة الأطفال الذين يعانون من السمنة بين أفراد العينة ١٣,٨ % ونسبة الأطفال الذين يعانون من زيادة الوزن ١٤% من أفراد العينة.
- أما بالنسبة للمقارنة بين الأماكن الحضرية و الأماكن الريفية فقد تبين أن نسبة السمنة بين أطفال الحضرتبلغ حوالي ثلاث أضعاف نسبة السمنة بين أطفال الريف.
- وجود علاقة طردية بين العادات الغذائية الغير سليمة للأسرة مثل (الأكل خارج المنزل و شراء الأطعمة السريعة وأكلها في المنزل و كذلك أكل الحلوى وشرب

المياه الغازية) و نسبة السمنة و زيادة الوزن عند الأطفال.

- وجود علاقة عكسية بين العادات الغذائية السليمة مثل (أخذ الفواكه والخضروات الطازجة كتصبيرة و تقليل كمية الدهون في الطعام والمحافظة على أخذ وجبة الإفطار) و نسبة السمنة وزيادة الوزن عند الأطفال.
- وجود علاقة عكسية بين ممارسة اللعب داخل المنزل و خارجه و كذلك المشاركة في الأنشطة الرياضية في المدرسة و زيادة نسبة السمنة وزيادة الوزن عند الأطفال.
- أما بالنسبة للأنشطة المستقرة أو الغير مصحوبة بالنشاط الحركي مثل مشاهدة التليفزيون و ألعاب الفيديو أو الكومبيوتر فتوجد علاقة طردية بينها وبين السمنة وزيادة الوزن حيث تزداد نسبة السمنة بزيادة عدد الساعات التي يقضيها الطفل في هذه الأنشطة.

التوصيات:

دور الوالدين:

- تقديم الوجبات و التصبيرة في أوقات منتظمة وعدم السماح للأطفال بالأكل أثناء مشاهدة التليفزيون و كذلك أثناء عمل الواجب.
- تعليم الطفل و تشجيعه على أن تناول الطعام الصحي و المداومة على ممارسة الأنشطة البدنية جزء من نظام حياته.

دور المدرسة:

- تشجيع الأطفال وحثهم على أهمية الطعام الصحى وخصوصا وجبة الافطار.
- الحد من بيع الأطعمة الغير مفيدة مثل الحلوى والشبسى داخل المدرسة واستبدالها بأخرى مفيدة.
- دمج التثقيف الغذائي داخل المنهج الدراسي
- الحرص على مشاركة جميع الأطفال في الأنشطة الرياضية المدرسية.

Knowledge and Attitude about Pre-Marital Counseling among Hadhramout University Students

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Abstract:

Background Preparation for marriage has become a popular intervention for many individuals planning to marry. **Aim:** To explore and compare the knowledge and attitude about premarital counseling among Hadhramout University Students. **Subjects & Methods:** A comparative descriptive design was used on 400 students (males & females) from Hadhramout University Colleges. The medical group is represented by College of Medicine & Health Sciences & College of Nursing and the non- medical group is represented by College of Arts & College of Administrative Sciences. Two types of tools were used for data collecting were (1) questionnaire was designed to cover data about students socio-demographic characteristics, and the students knowledge regarding premarital counseling and care, (2)- A three point likert- like scale was used to assess the student's attitude toward pre-marital counseling. **Results:** The results of the present study revealed that only 5.5% & 22.5% of non-medical and medical groups of students respectively scored high level of knowledge about premarital counseling (P = 0.000). Also, the present study revealed that (68.5% & 59.5%) of medical and non-medical groups respectively expressed a positive attitude toward premarital counseling also, the present study revealed that the females had high level of knowledge score (23.8%) than males (9.3%) about premarital counseling (P = 0.000). There are statistically significant difference between medical and non-medical groups in knowledge and attitude toward premarital counseling. Therefore, **it is recommended that;** conducting health education services about premarital counseling in every college, booklet about premarital counseling should be available in every college in addition to every medical care services.

Keywords*:* Knowledge, Attitude, Pre-marital Counseling, Hadhramout, university students.

Introduction:

Premarital counseling is one of the health promotion activities which provided in the maternal and child health services programs **(Whitehead, 2004)**. It is the services offered to young couples on their way to marriage in order to guide, educate and prepare them for the establishment of a healthy family **(Al- Kahtani, 2000).** Premarital counseling is one of the most important strategies for prevention of genetic disorders congenital anomalies, and several medical psychosocial marital problems **(Mitwally, Abd El-Rahman& Mohammed, 2000).**

Several extensive studies have shown that among the offspring's of consanguineous marriage, there is an increased prenatal morbidity and mortality rate together with increased incidence of congenital abnormalities and mental retardation **(Al-Gazali, Hammy & Arrayed, 2006).** The incidence of consanguinity is relatively high in Yemen with predominantly first cousin marriage. This might be related to the deeply rooted social and cultural beliefs in the country (**Gunaid, Hummad & Tmim, 2004).**

Genetic counseling is a component of premarital counseling it

provides services to help people to understanding the disorder about which they are concerned and the risk that it will occur in their families **(Al Sulaiman et al., 2008).**

One of the basic components of premarital counseling also is family life education; it provides the couples with knowledge about individuals as sexual being, as well as addressing family roles and responsibilities, parenting, human development and inters personal relations **(Long, Burnett & Thomas, 2006).** In Bahrain, a premarital screening service has been available at the genetic department in the Ministry of Health since 1985. It was established as an attempt to reduce the incidence of genetic diseases. In 1992, premarital counseling was incorporated in the primary health care services to be included in all health centers throughout the Kingdom of Bahrain. A new law has been passed by the Bahrain Government which requires that all Bahraini couples, who are planning to marry, undergo mandatory premarital counseling (**Al-Arrayed & Al- Hajeri, 2005).**

In Yemen a study carried out in Sa'dah showed that there were many cases of sickle cell disease occurs in Republic Of Yemen and the exact gene frequency is unknown **(Al-Khorasani et al., 2005).** Other reporters showed that a high frequency of thalassaemia in the sickle cell disease patients, Yemeni population (**Haider**, **1997).**

Significance of the study:

Assesses the knowledge and attitude among Hadhramout University Students about premarital counseling because this subject stigma in Yemen.

Aim of the study:

The aim of the study is to explore and compare the knowledge and attitude about premarital counseling among Hadhramout University Students.

Research questions:

1- Do Hadhramout University Students have knowledge and attitude about pre-marital counseling?

Subjects & Methods:

Study design:

This study was carried out using a descriptive comparative design.

Setting:

The study was conducted at Hadhramout University of Science & Technology, Mukalla City, and Hadhramout Governorate, Yemen.

Subjects:

The study was conducted on 400 males & females who had accepted to participate in this study out 1503 from Hadhramout University students. 200 of medical education students:130 students from Medicine & Health Sciences College out of 270 students and 70 students from nursing college out of 97 students and 200 of non-medical education students: 100 students from administrative sciences college out of 500 students and 100 students from arts college out of 636 during the academic year 2009-2010.

Tools for data collection:

Two types of tools were used for data collection

1. A questionnaire sheet was designed by the researcher to cover data about students' socio-demographic characteristics, and the students' knowledge about premarital counseling and care.
2. A three point likert- like scale was used to assess the responses to attitude statements toward premarital counseling among medical and non-medical students.

Scoring:

A scoring for students' knowledge regarding premarital counseling was consisted of given two

for complete correct answers, one for incomplete correct answers, while the wrong answer was scored zero. A scoring was given to each question and a total knowledge score was 60 points.

Students who obtained ≥ 45 complete correct answers were classified as having high level of knowledge, students who had 35 to less than 45 complete correct answers were described as having an average level of knowledge and who had less than 35 complete correct answers were described as having low level of knowledge

A scoring for students' attitude toward premarital counseling was consisted of given three for agree, two for not sure and one for disagree. A scoring was given to each question and a total of attitude score was 30 points.

A total score of 30 conveys a positive attitude toward pre-marital counseling, while a total score of 20-25 conveys indifferent attitude toward pre-marital counseling and a total score of less than 20 conveys negative attitude toward pre-marital counseling.

Pilot Study:

A pilot study was carried out before starting data collection on 10% of the study sample (40 students from medical and non medical colleges) were excluded from the main study sample to test the feasibility of the study and the clarity and applicability of the tools.

Content validity of the tools were ascertained by a panel of three experts in Community Health Nursing who revised the tools for clarity, relevance, applicability, comprehensiveness, and ease for implementation according modifications were applied.

Fieldwork:

The data collection procedure of this study was executed in two months, from first of February to end of March, 2010. The researcher started by explaining the purpose of the study briefly to the students during the break time between lectures. Each student was asked to respond to a questionnaire sheet under the guidance of researcher. The time consumed to answer each questionnaire sheet ranged from 20-25 minutes. Sheets were collected in the same day. Distribution of the questionnaire sheet was done until the required number of males and females was obtained from medical and non-medical colleges.

Administrative and ethical Consideration:

A written permission has been taken from the Dean of the Colleges chosen in the study. The agreement for participation of the subjects was taken orally after the aim of the study explained to them, they were given an opportunity to refuse to participated, they were notified that could withdraw at any time of the research, also they were assured that the information would renowned confidential and used for the research purpose only.

Statistical analysis:

Data entry and statistical analysis were done using SPSS version 16.0 statistical software package. Data were presented using descriptive statistics in the form of frequencies and percentages. Chi-square test was used for comparing quantitative categorical variables. Statistical significance was considered at P-value < 0.05.

Results:

Table (1) shows that only 5% and 9.5% of non-medical and medical groups respectively reported complete correct answers about definition of premarital counseling and 67.5% and 60.0% of them respectively reported wrong or don't know about definition of premarital counseling, the difference

between non-medical and medical groups statistically non-significant (P = 0.13). Also, 5% and 7.5% of both groups mentioned complete correct answers about component of premarital counseling and 81.5% and 83.0% of non-medical and medical students respectively reported incomplete correct answers about component of premarital counseling, the difference between two groups was statistically non-significant (P = 0.29). As regard importance of premarital counseling only 8% & 17% of non-medical and medical groups respectively reported complete correct answers while, 9.5% & 7.0% of them respectively mentioned wrong or don't know about importance of premarital counseling. The difference between two groups was statistically significant (P = 0.02).

Figure (1) shows that 71.5% of non-medical education and 69.5% of medical education agree on presence of premarital counseling law compared to 28.5% & 30.5% of them respectively disagree on presence of premarital counseling law. The difference between two groups was statistically not significant (P = 0.66).

Figure (2) shows that 68% & 37% of non-medical and medical groups respectively reported don't know premarital vaccination and only 1.0% & 8.0% of them respectively mentioned complete correct answers**.** The difference between two groups was statistically significant (P = 0.000).

Table (2) reveals that only 4.5%, 2.0% and 1.5%, 5.5% of non-medical and medical students respectively reported physician and nurse as providers of premarital counseling compared to 23.5% and 11.5% of them respectively mentioned don't know providers of premarital counseling, the difference between two groups was statistically significant (P = 0.000). As regard to knowledge of students about sources of information about premarital counseling between non-medical and medical groups 15.0% and 23.0% respectively reported audio visual media were considered main sources of information about premarital counseling and (35.5% & 49.0%) of them respectively mentioned more than one source, the difference was statistically significant (P = 0.000). Also, this table shows that the majority of both groups preferred maternal and child health centers (MCH) as a suitable places of premarital counseling and care 18.0% and 17.0% of non-medical and medical groups respectively while, only 11.0% and 3.5% of them respectively reported hospitals as outlets of premarital counseling, the difference between two groups were statistically significant (P = 0.00). Concerning with suitable time of premarital counseling both groups; non-medical and medical 50.5% and 53.5% respectively were preferring premarital counseling during educational years compared to 34.0% and 30.0% of them were preferring the suitable time to provide of premarital counseling direct before marriage, the difference was statistically not significant (P = 0.64). On the other hand, non-medical and medical groups reported the reasons of not utilizing of premarital counseling and care was lack of motivation 35.5% and 32% of them respectively. While, 23.0% and 8.0% of them mentioned the reasons of not utilizing was religion, the difference was statistically significant (P = 0.000).

Table (3) shows 22.5% of medical group and 5.5% of non-medical group had a high level of knowledge score about premarital counseling and care (PMCC) and 48.5% and 31.0% of them respectively had average level of knowledge score about PMCC. While, 63.5% and 29.0%

of non-medical and medical groups had low level of knowledge score about PMCC, the difference between two groups was statistically significant (P = 0.000). On other hand, 68.5% and 59.5%of medical and non-medical groups respectively had expressed a positive attitude score toward premarital counseling and 27.5% & 35.5 of them had expressed a different attitude score toward PMCC. But, only 4.0 and 5.0% of them respectively had expressed a negative attitude score toward premarital counseling and care. The difference between two groups was statistically not significant (P = 0.17).

Figure (3) illustrated that 22.5% of medical group and only 5.5% of non-medical group had a high level of knowledge score about premarital counseling and care compared to 63.5% and 29.0% of them respectively had low level of knowledge score about premarital counseling and care. The difference was statistically significant (P = 0.000).

It clear from **figure (4)** that 68.5% and 59.5% of medical and non-medical groups respectively had expressed a positive attitude toward premarital counseling and care and only 4.0% and 5.0% of them had expressed a negative attitude toward premarital counseling and care. The difference was statistically not significant (P = 0.17).

Table (4) illustrates the responses to attitude statements toward premarital counseling and care (PMCC) among medical and non-medical students. It shows that 84.0% of medical students agreed to attend lecture about PMCC compared to 82.5% of non-medical students and only 5.5% and 3.0% of medical & non-medical students disagreed to attend lecture about PMCC. And, 84.0% of non-medical group agreed to conduct premarital examination procedure compared to 78.5% of medical group. Concerning statement of " Perceived importance of including family life education in secondary schools", more than three quarters of medical group (76.0%) agreed with it compared to seventy percent of medical group and only 5.0% of medical group disagreed with it compared to 10.5% of medical group. Also, 74.5% of medical students agreed about the importance of including reproductive health in secondary education compared to 68.0% of non-medical students. As regarding statement of "importance of including premarital counseling and care in university education" 83.0% of medical students agreed compared to 80.5% of non-medical students while, only 7.5% of both groups disagreed with it. The difference between medical & non-medical students attitude toward PMCC was statistically not significant (P > 0.05).

Table (5) displays the responses to attitude statements toward premarital counseling and care among medical and non-medical students. It shows that 61.5% of medical education students agreed to notify the other couple in case of chronic diseases in his/her family compared to 57.5% of non-medical education students, while, only 16.5% of non-medical group compared to 12.5% of medical group disagree to the same statement. Also, 64.0% of medical group compared to 54.0% of non-medical group agreed to notify the other couple in case of presence of genetic diseases in his/her family and only 13.0% of medical group compared to 18.0% of non-medical group disagreed to the same statement, The difference between two groups was statistically not significant (P > 0.05). Concerning acceptance to continue relation with other person after infected with genetic diseases 45.0% of medical group compared to 37.0% of non-medical group agreed to

this statement while, 20.0% of non-medical group compared to 9.5% of medical group disagreed with this statement, The difference between two groups was statistically significant (P = 0.01). Concerning statement of " in consanguineous marriage did you attend genetic counseling" 68.5% of medical group compared to 67.5% of non-medical group agreed with it and only 9.5% & 10.5% of them disagreed with it.

Figure (5) shows that 23.8% of female students compared to 9.3% of male students had high level of knowledge score about premarital counseling and care (PMCC) and 30.0% of female students compared to 54.0% of male students had low level of knowledge score about PMCC. So, sex has influence on level of knowledge about PMCC among Hadhramout University students. The difference was statistically significant (P = 0.000).

Figure (6) shows that 82.3% of female students compared to 55.2% of male students had expressed a positive attitude score toward premarital counseling and care (PMCC) and only 3.1% of female students compared to 5.2% of male students had expressed a negative attitude score toward PMCC. So, sex has influence on attitude toward PMCC among Hadhramout University students, the difference was statistically significant (P = 0.000).

Table (6) shows that 52.8% of final year students aged 23-27 years; had low level of knowledge score about premarital counseling and care (PMCC) compared to 41.0% of first grade students aged 19-22 years and only 13.5% of students in the final year had high level of knowledge score about PMCC compared to 14.4% of students who with age first grade, the difference was statistically not significant (P = 0.05). On other hand, 64.9% of first grade students their age 19-22 years expressed positive attitude toward PMCC compared to 62.9% of final year students and only 4.5% of both first grade & final year students expressed negative attitude toward PMCC, the difference was statistically not significant (P = 0.91). So, age not influence on level of knowledge or attitude toward premarital counseling and care among Hadhramout University students.

Table (7) reveals that 50.4% of students who live in rural areas had low level of knowledge score about premarital counseling and care (PMCC) compared to 44.5% of them who live in urban areas and only 13.2% of students who live in rural areas had high level of knowledge score about PMCC compared to 14.3% of them who live in urban areas. On other hand, 57.9% of students who live in rural areas expressed positive attitude toward PMCC compared to 66.7% of them who live in urban areas and only 6.6 of students who live in rural areas expressed a negative attitude toward PMCC compared to 3.6% of them who live in rural areas, the difference was statistically not significant (P > 0.05). So, the residence not influence on level of knowledge or attitude toward PMCC among Hadhramout University students.

It is clear from **figure (7)** that 68.3% of students who with Radio & T.V in their house had low level of knowledge about premarital counseling and care (PMCC) compared to 40% of them who with all media in their house and only 14.5% of students who with all media in their house had high level of knowledge score compared to 12.2% of them who with Radio & T.V in their house about premarital counseling and care. So, mass media present in students home influence on students knowledge about PMCC and

the difference was statistically significant (P = 0.000).

It is clear from **figure (8)** that 67.0% of students who had all media in their house expressed positive attitude toward premarital counseling and care (PMCC) compared to 52.5% of them had Radio & T.V in their house also, 5.0% of students who had all media in their house expressed negative attitude toward PMCC compared to only 2.4% of them who had Radio & T.V in their house. So, mass media influence on students attitude toward PMCC and the difference was statistically significant (P = 0.01).

Discussion:

Premarital counseling and examination are gaining an increased attention now days. It is one of the most important strategies for prevention of genetic disorders congenital anomalies, and several medical psychosocial marital problems **(Mitwally, Abd El-Rahman & Mohammed, 2000).** The aim of the study is to explore and compare the knowledge and attitude about premarital counseling among Hadhramout University Students.

The current study was done to a sample of students in medical and non-medical educational group from first grade and final year that also will be the future couples and care providers (physicians & nurses) in our community.

Concerning the definition of premarital counseling, the present study revealed that nearly two thirds among both non-medical and medical group did not able to define the term. As regard the importance most of the study sample reported incomplete correct answer about the importance of premarital counseling. Also, the majority of both groups (81.5% & 83%) give incomplete correct answer about component of premarital counseling. This may be due to the fact this subject is not considered through schools books (**Table 1).** This lack of students' knowledge may be attributed to insufficient basic information obtained during their formal academic education in relation to specific area of knowledge and this service in MCH centers is absent in Yemen. These results agree with the study of **Abd El-Rahman (2001)** who found that deficient knowledge as regard of the term and its component was found among medical and non-medical students in Zagazig University.

Concerning the premarital examination and counseling law the majority of students insists on presence of premarital counseling law **Figure (1).** Because in Yemen, premarital counseling and examination services are absent and there are no rules regarding the nature or scope of counseling, the practitioners or other usual conditions and requirements (**Ministry of health & Population, In Yemen (2009).** In Bahrain, a new law has been passed by the Bahrain Government which requires that all Bahraini couples, who are planning to marry, undergo mandatory premarital counseling (**Al Arrayed & Al Hajeri, 2005).**

Regarding the premarital vaccine (against rubella) the present study revealed that 68% & 37% of non-medical and medical group did not able to mention the vaccine giving during premarital which was rubella. Since rubella vaccine was not present in our immunization schedule either during the first two years of life or during educational year **Figure (2). Frederiksen (2000)** mentioned that active immunization against German measles (Rubella) is given to the females to avoid any possible infection during pregnancy, which may cause serious teratogenic effects as

anencephaly, cataract, deaf, mutism and congenital heart diseases especially in first three months of pregnancy.

As regard the providers of premarital counseling the present study revealed that 30% of non-medical group and 14% of medical group decided that audio visual media was the important provider of this service **Table (2).** This result disagrees with **Mahmoud, Fikry** and **Okasha, (1994)** who mentioned that 5.9% of students referred their knowledge about premarital counseling to medical personnel.

Concerning the source of students' information about premarital counseling the study demonstrated that the audio visual media was the first source of medical students' information about premarital counseling and relatives in non-medical group**.** This results reinforce the fact that mass media in home is very useful in providing information to large number of people **Table (2)**. This results goes with **Mitwally Abd El-Rahman** and **Mohammed, (2000)** who revealed that the mass media were the main sources of information about premarital counseling because T.V and net where available in every house beside the students spent long time for watching it.

Regarding the knowledge of students about centers providing premarital counseling 18% & 17% of non-medical and medical group mentioned that maternal and child health services were the suitable place for premarital counseling **Table (2)**. These results agree with the study conducted in Zagazig which revealed that 48.9% & 43.7% of non-medical and medical group mentioned that maternal and child health services were suitable place for premarital care **(Abd El-Rahman, 2001)**

As regard the suitable time to provide premarital counseling half or more than half of non-medical and medical group was preferred premarital counseling during educational years **Table (2).** These results disagree with **Schumm et al., (1998)** who revealed that these services must be provided before marriage within 6- 8 months because this service helps expected couples to know if there is any congenital abnormalities and prepare them for marriage by given sexual life education. The researchers had agreed with these results because it is important to give family life education during educational years to adolescence and youth.

This study revealed that there were many reasons mentioned by the students as lack of motivation (35.5% & 32%) of non-medical and medical group respectively. The other reason is fatalism (23% & 8%) of non-medical and medical group respectively **Table 2**. These results because of the service is unknown to students and also culture and believes in Yemen did not encourage the people to discuss this subject and considered as stigma.

The present study revealed that few numbers of non-medical and medical groups had a good level of knowledge score about premarital counseling (**Table 3 & Figure 3).** This is disappointing, since the sample is composed of university students who are supposed to be well informed about most of this issues that directly influence the nature of their present as well as future life. This result agrees with **Abd El-Rahman, (2001)** who mentioned that only 12.3% of university students had a good level of knowledge about premarital counseling. Lack of knowledge may be attributed to several factors, of which the lack of is even mentioning the issues in the academic preparation on

all levels from the primary level to the university level in Yemen. Even the curriculum of medical schools in this community does not entail any part about premarital examination and counseling.

Studying the students' attitude towards premarital counseling it was observed that two third of medical students tended to have a positive attitude toward this issue (**Figure 4)**. This may be related to the nature of their study as health professionals (College of Medicine & Health Sciences & College of Nursing).

When comparing students' knowledge and attitude 68% of students had a positive attitude toward premarital counseling and care, yet only 5.5% & 22.5% of non-medical and medical group respectively had a good level of knowledge about premarital counseling. The positive attitude were present (68%) among medical students but they had low level of knowledge about premarital counseling. These results comes in agreement with **Al-Khaldi et al., (2002)** who mentioned that most of the students at Health Sciences College in Abha, KSA have good attitudes towards premarital counseling in spite of a few students who justify their refusal by the misunderstanding of Islamic rules. This misunderstanding needs intensification of health education in which religious leaders are involved to clarify and correct this misconception.

In this study, the students had agreed attitude (73%) to inclusions of family life education in schools and university but their knowledge score about it are deficient. This finding was disagree with **Dabbous et al, (1995)** who found that no agreement of medical and non-medical education for inclusion of family life education in school curriculum (**Table 4).**

The present study revealed that both groups had indifferent attitude toward continuing relation after presence of genetic (hereditary) diseases (43% & 45.5%) of non-medical and medical group respectively. However (37% & 45%) of them respectively had agree attitude and (20% & 9.5%) of them respectively also, had disagree attitude toward premarital counseling (**Table 5).** This attitude could be attributed to fear from transmission of genetic diseases to their offspring's especially that both groups had nearly equal knowledge about genetic diseases and hereditary diseases.

It is very interesting to notice that female students had high level of knowledge score about premarital counseling and care (23.8%) compared to 9.3% of male students as well as a positive attitude toward premarital counseling and care (82.3%) compared to 55.2% of male students (**Figures 5 & 6).** This result may be attributed to the present improvement of the social status of Yemeni women e.g., female education, involvement in various occupations. This result disagree with the study of **Al- Kahtani, (2000**) who mentioned that there was no statistical difference on the attitudes on premarital health counseling (PMHC) acceptance between males and females and agrees with the study of **Mahmoud, Fikry** and **Okasha, (1994).**

The present study showed in **Figures 7 & 8** that all media in the house were more effective on the level of knowledge score and attitude score of non-medical and medical group about premarital counseling. This result agrees with the study of **Abd El-Rahman, (2001).**

The results of the current study showed that in **table 6** that age not influence on level of knowledge or attitude toward premarital counseling

and care among Hadhramout University students. These results may be because of law in Yemen prevents joined students to university education until one year after finished secondary education. So, this study reveals that students represented in first grade with age (19-22 years) this factor may be cause of no difference of knowledge and attitude toward premarital counseling and care between first grade students and final year students. Also, the residence not influence on level of knowledge or attitude toward PMCC among Hadhramout University students. These results disagree with **Abd El-Rahman, (2001)** who mentioned in her study carried out in Zagazig University that the age of students influence on the students knowledge and their attitude toward premarital counseling and care (PMCC).

Conclusion and recommendations:

It can be concluded from the results of this study that the students were lack of knowledge about premarital counseling related to definition, component, importance, vaccination, providers, and outlets of premarital counseling although, those students expressed a positive attitude toward premarital counseling. Also, the females had more satisfactory knowledge score than males about premarital counseling and there are statistically significant between medical and non-medical groups in knowledge and attitude toward premarital counseling.

Based on the findings of the study, the following recommendations are suggested:

1. Conducting health education services about premarital counseling in every college.
2. Provide health education about premarital counseling for the students during medical examination before admission to university.
3. University services should distributed booklet about premarital examination and places provided these services.

Table (1): Distribution of the study sample by their knowledge about definition, importance and, component of premarital counseling.

Group education / Items	Non- medical education No. 200		Medical education No. 200		Total No. 400		X^2	* P-Value
	No	%	No	%	No	%		
Definition of premarital counseling								0.13
• Complete correct answers.	10	5.0	19	9.5	29	7.2		
• Incomplete correct answers.	55	27.5	61	30.5	116	29.0	3.98	(> 0.05)
• Wrong or don't know.	135	67.5	120	60.0	255	63.8		
Importance of PMC:								0.02
• Complete correct answers.	16	8.0	34	17.0	50	12.5		
• Incomplete correct answers.	165	82.5	152	76.0	317	79.3	7.77	(< 0.05)
• Wrong or don't know.	19	9.5	14	7.0	33	8.2		
Component of PMC:								0.29
• Complete correct answers.	10	5.0	15	7.5	25	6.2		
• Incomplete correct answers.	163	81.5	166	83.0	329	82.3	2.41	(> 0.05)
• Wrong or don't know.	27	13.5	19	9.5	46	11.5		

P < 0.05 (statistically significant) ***PMC:*** *Premarital Counseling.*

Table (2): Distribution of the study sample by their knowledge as regarding the providers, sources of information, outlets, and suitable time of PMCC and reasons of not utilizing PMCC.

Group education / Items	Non-medical education		Medical education		Total		X^2	* P- Value
	No. 200		No. 200		No. 400			
	No	%	No	%	No	%		
Providers of premarital counseling.								
• Physician.	9	4.5	4	2.0	13	3.3		
• Nurses.	3	1.5	11	5.5	14	3.5		0.000
• Social worker.	38	19.0	27	13.5	65	16.2	55.52	
• Audio visual media.	60	30.0	28	14.0	88	22.0		(< 0.05)
• More than one.	43	21.5	107	53.5	150	37.5		
• Don't know.	47	23.5	23	11.5	70	17.5		
Sources of information about PMCC.								
• Audio visual media.	30	15.0	46	23.0	76	19.0		0.000
• Relatives.	54	27.0	25	12.5	79	19.8		
• Friends.	34	17.0	19	9.5	53	13.2	22.62	(< 0.05)
• Neighbors.	1	0.5	1	0.5	2	0.5		
• More than one.	71	35.5	98	49.0	169	42.2		
• Don't know.	10	5.0	11	5.5	21	5.3		
Outlets of PMC.								
• Clubs.	4	2.0	3	1.5	7	1.8		
• Hospitals.	22	11.0	7	3.5	29	7.2		0.00
• Private Clinic.	4	2.0	3	1.5	7	1.8		
• MCH.	36	18.0	34	17.0	70	17.5	20.02	(< 0.05)
• Academic education.	25	12.5	16	8.0	41	10.2		
• More than one.	64	32.0	102	51.0	166	41.5		
• Don't know.	45	22.5	35	17.5	80	20.0		
Suitable time of PMC.								
• During educational years.	101	50.5	107	53.5	208	52.0		0.64
• Direct before marriage.	68	34.0	60	30.0	128	32.0	1.67	
• More than one.	17	8.5	22	11.0	39	9.8		(> 0.05)
• Don't know.	14	7.0	11	5.5	25	6.2		
Reasons of not utilizing PMCC.								
• Fatalism (Religion).	46	23.0	16	8.0	62	15.5		
• Lack of motivation.	71	35.5	64	32.0	135	33.8		0.000
• Increase price.	12	6.0	17	8.5	29	7.2	37.47	
• More than one.	30	15.0	75	37.5	105	26.3		(< 0.05)
• Don't know.	41	20.5	28	14.0	69	17.2		

P < 0.05 (statistically significant)

***PMC:** Premarital Counseling.* ***PMCC:** Premarital Counseling and Care.*

Table (3): Distribution of the study sample by their total level of knowledge about premarital counseling and care and their total of attitudes toward PMCC.

Group education / Knowledge & Attitude	Non-medical education		Medical education		Total		X^2	* P- Value
	No. 200		No. 200		No. 400			
	No	%	No	%	No	%		
Total Level of knowledge.								
• Low.	127	63.5	58	29.0	185	46.2		0.000
• Average.	62	31.0	97	48.5	159	39.8		
• High.	11	5.5	45	22.5	56	14.0	54.08	(< 0.05)
Total of attitude.								
• Negative.	10	5.0	8	4.0	18	4.5		0.17
• Indifferent.	71	35.5	55	27.5	126	31.5	3.52	(> 0.05)
• Positive.	119	59.5	137	68.5	256	64.0		

P < 0.05 (statistically significant). ***PMCC:*** *Premarital Counseling and Care.*

Positive attitude: *(A score 30 point),* ***Indifferent attitude****: (A score 20- 25) and* ***Negative attitude:*** *(A score 20).*
High knowledge: *(A score ≥ 45 point),* ***Average knowledge:*** *(A score 35- 45) and* ***Low knowledge****: (A score < 35).*

Table (4): Response to attitude statements toward premarital counseling and care among medical and non-medical education students.

Group. education / Attitude statements	Non-medical education No. 200		Medical education No. 200		Total No. 400		X^2	* P- Value
	No	%	No	%	No	%		
Acceptance to attend lecture about premarital counseling and care.								
• Agree.	165	82.5	168	84.0	333	83.2		0.24
• Indifferent.	29	14.5	21	10.5	50	12.5	2.77	
• Disagree.	6	3.0	11	5.5	17	4.3		(> 0.05)
Acceptance to go through premarital counseling and care:								
• Agree.	168	84.0	157	78.5	325	81.2	4.78	0.09
• Indifferent.	17	8.5	31	15.5	48	12.0		
• Disagree.	15	7.5	12	6.0	27	6.8		(> 0.05)
Perceived importance of including family life education in secondary schools.								
• Agree.	152	76.0	140	70.0	292	73.0	4.40	0.11
• Indifferent.	38	19.0	39	19.5	77	19.2		
• Disagree.	10	5.0	21	10.5	31	7.8		(> 0.05)
Importance of including Reproductive health in secondary education.								
• Agree.	136	68.0	149	74.5	285	71.3	2.30	0.31
• Indifferent.	49	24.5	41	20.5	90	22.5		
• Disagree.	15	7.5	10	5.0	25	6.2		(> 0.05)
Importance of including Premarital counseling and care (PMCC) in university education.								0.72
• Agree.	161	80.5	166	83.0	327	81.8		
• Indifferent.	24	12.0	19	9.5	43	10.8	.658	(> 0.05)
• Disagree.	15	7.5	15	7.5	30	7.5		

P < 0.05 (statistically significant). ***PMCC:*** *Premarital Counseling and Care.*

Table (5): Response to attitude statements toward premarital counseling and care among the study sample.

Group education / Attitude statements	Non-medical education		Medical education		Total		X^2	* P- Value
	No. 200		No. 200		No. 400			
	No	%	No	%	No	%		
Intention to notify the other couple in case of chronic diseases in my family.								
• Agree.	115	57.5	123	61.5	238	59.5		0.50
• Indifferent.	52	26.0	52	26.0	104	26.0	1.37	(> 0.05)
• Disagree.	33	16.5	25	12.5	58	14.5		
Intention to notify the other couple in case of presence of genetic diseases in my family.								0.11
• Agree.	108	54.0	128	64.0	236	59.0		(> 0.05)
• Indifferent.	56	28.0	46	23.0	102	25.5	4.28	
• Disagree.	36	18.0	26	13.0	62	15.5		
Acceptance to continue relation with other person after infected with genetic diseases.								
• Agree.	74	37.0	90	45.0	164	41.0		0.01
• Indifferent.	86	43.0	91	45.5	177	44.2	9.17	(< 0.05)
• Disagree.	40	20.0	19	9.5	59	14.8		
Acceptance to go through management in case of some hereditary diseases.								
• Agree.	181	90.5	180	90.0	361	90.3		0.51
• Indifferent.	11	5.5	15	7.5	26	6.5	1.31	(> 0.05)
• Disagree.	8	4.0	5	2.5	13	3.2		
In consanguineous marriage did you attend genetic counseling.								
• Agree.	135	67.5	137	68.5	272	68.0		0.94
• Indifferent.	44	22.0	44	22.0	88	22.0	.115	(> 0.05)
• Disagree.	21	10.5	19	9.5	40	10.0		

P < 0.05 (statistically significant). ***PMCC:*** *Premarital Counseling and Care.*

Table (6): The relation between students' age and total level of knowledge and total attitude toward premarital counseling and care.

Age / Knowledge & Attitude	First grade (19-22 Y) No. 222		Final year (23-27 Y) No. 178		Total No. 400		X^2	* P- Value
	No	%	No	%	No	%		
Total Level of knowledge:								
• Low.	91	41.0	94	52.8	185	46.2		
• Average.	99	44.6	60	33.7	159	39.8	5.99	0.05
• High.	32	14.4	24	13.5	56	14.0		
Total of attitude:								
• Negative.	10	4.5	8	4.5	18	4.5		0.915
• Indifferent.	68	30.6	58	32.6	126	31.5	.178	(P > 0.05)
• Positive.	144	64.9	112	62.9	256	64.0		

P < 0.05 (statistically significant).

Positive attitude: *(A score 30 point),* ***Indifferent attitude****: (A score 20- 25) and* ***Negative attitude:*** *(A score 20).*
High knowledge: *(A score ≥ 45 point),* ***Average knowledge:*** *(A score 35- 45) and* ***Low knowledge****: (A score < 35).*

Table (7): Relation between students' residence and total level of knowledge and total of attitude toward premarital counseling and care.

Residence / Knowledge & Attitude	Rural No. 121		Urban No. 279		Total No. 400		X^2	* P- Value
	No	%	No	%	No	%		
Total level of knowledge:								
• Low.	61	50.4	124	44.5	185	46.2		
• Average.	44	36.4	115	41.2	159	39.8		0.54
• High.	16	13.2	40	14.3	56	14.0	1.22	(> 0.05)
Total of attitude:								
• Negative.	8	6.6	10	3.6	18	4.5		0.16
• Indifferent.	43	35.5	83	29.7	126	31.5	3.64	(> 0.05)
• Positive.	70	57.9	186	66.7	256	64.0		

P < 0.05 (statistically significant).

Positive attitude: *(A score 30 point),* ***Indifferent attitude****: (A score 20- 25) and* ***Negative attitude:*** *(A score 20).*
High knowledge: *(A score ≥ 45 point),* ***Average knowledge:*** *(A score 35- 45) and* ***Low knowledge****: (A score < 35).*

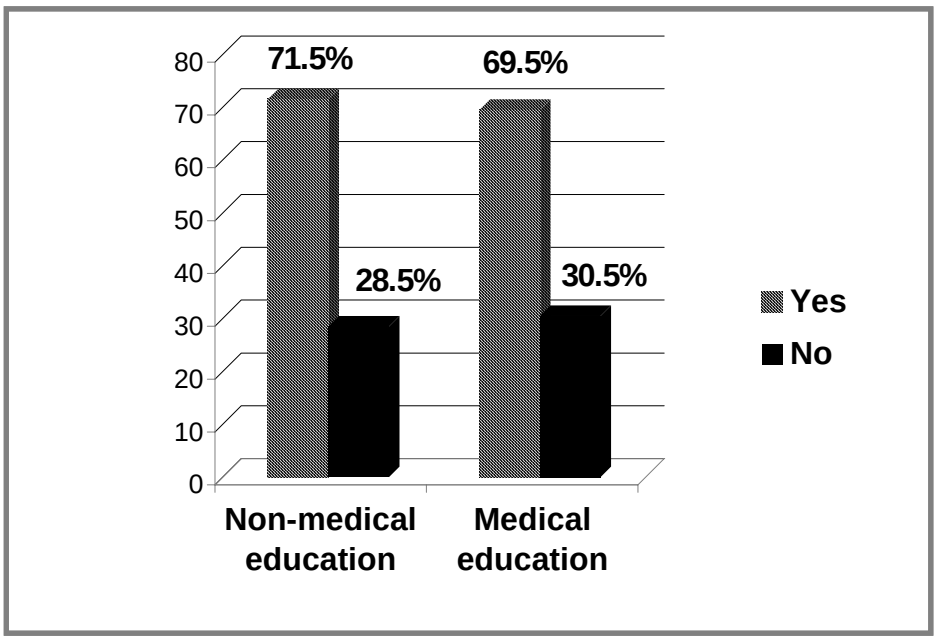

Figure (1): Distribution of the study sample by their awareness about present premarital counseling law.

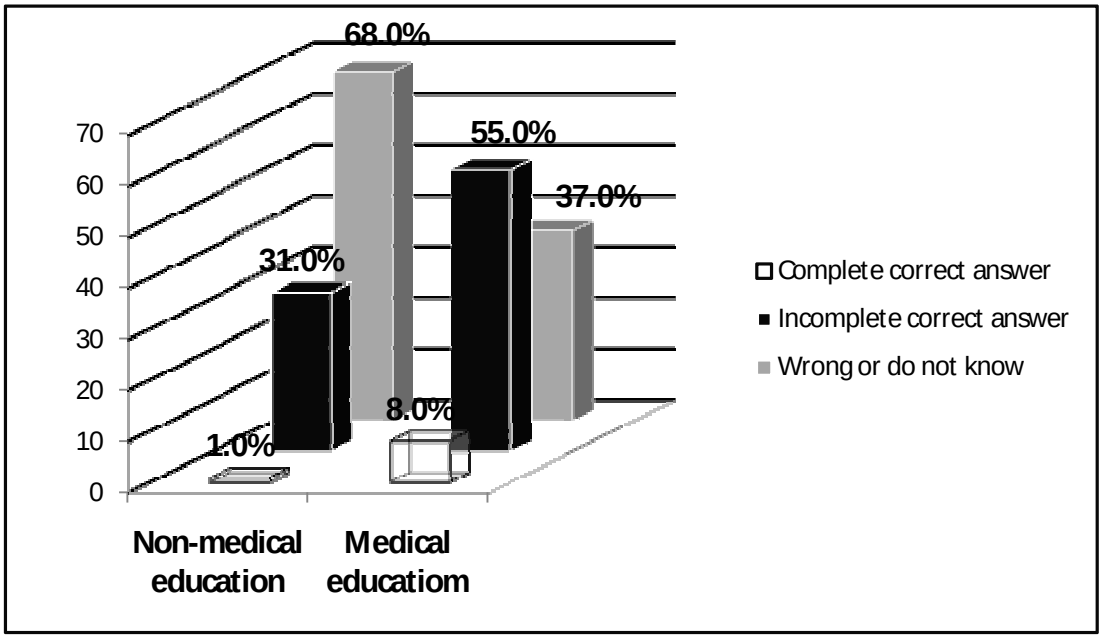

Figure (2): Distribution of the study sample by their knowledge about premarital vaccination.

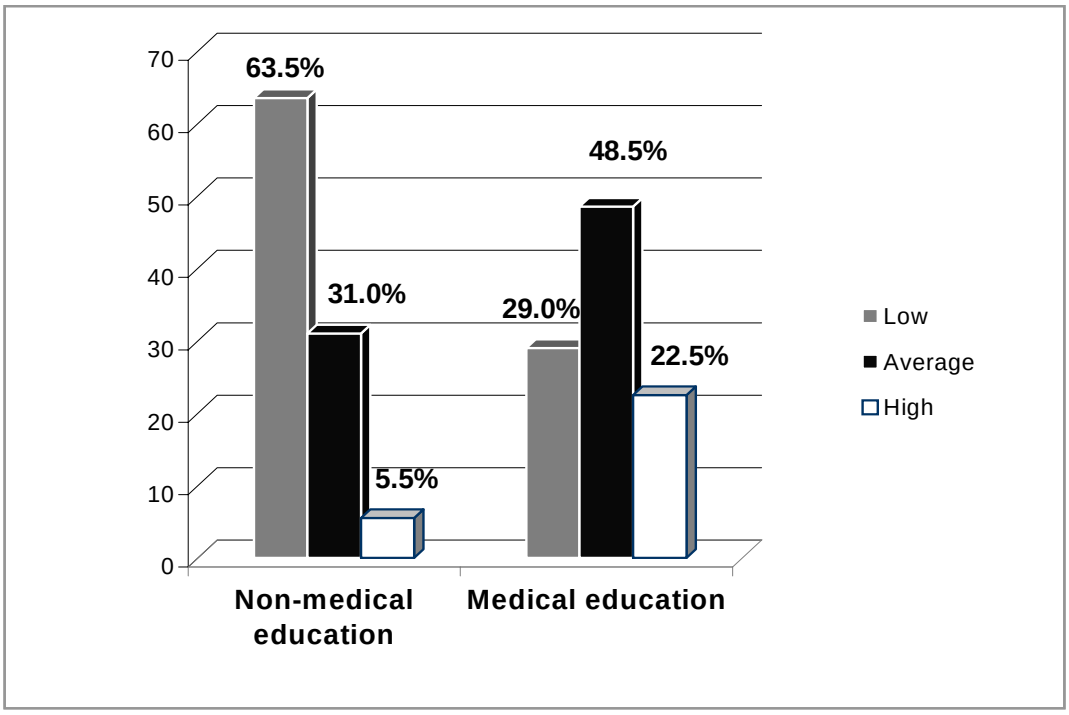

Figure (3): Distribution of the study sample by their total knowledge about premarital counseling and care

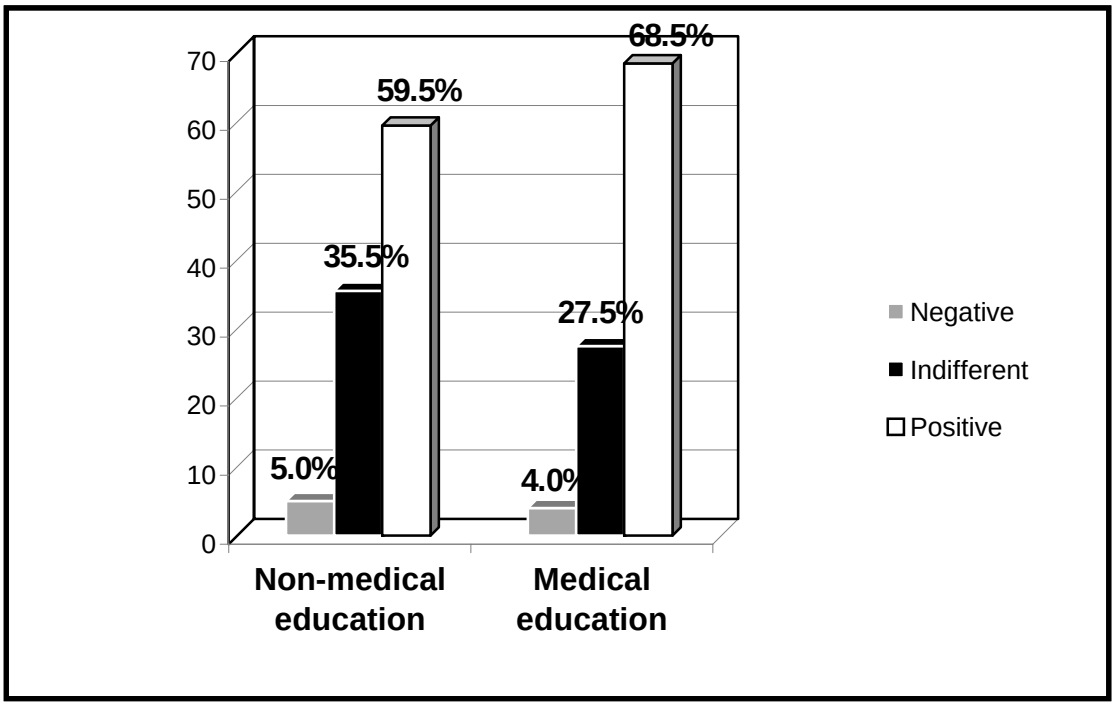

Figure (4): Distribution of the studied sample by their total attitude toward premarital counseling and care.

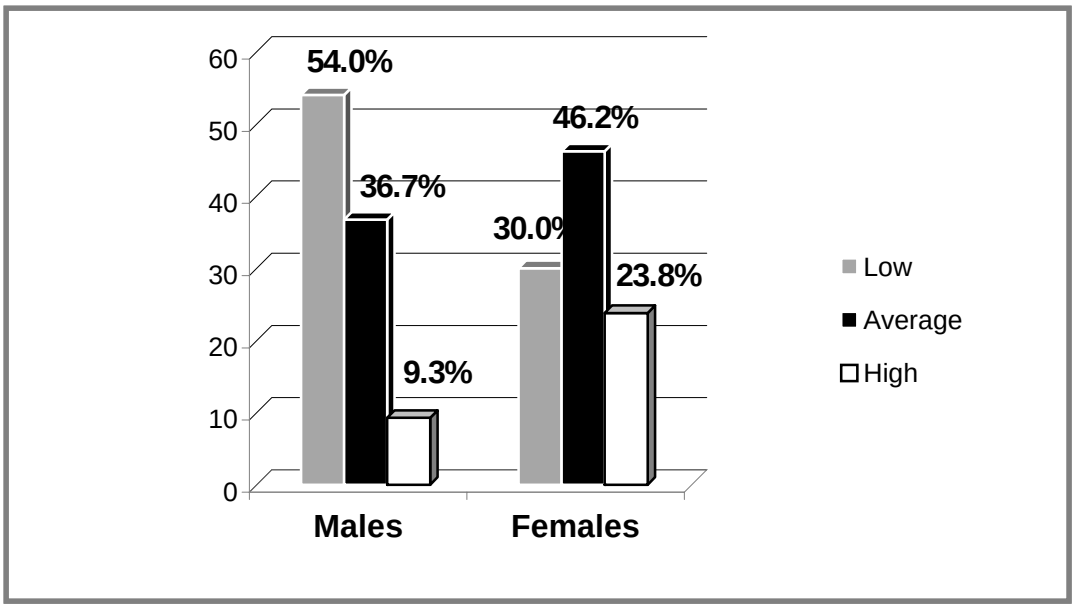

Figure (5): Distribution of the study sample by their sex and their knowledge about premarital counseling and care (PMCC).

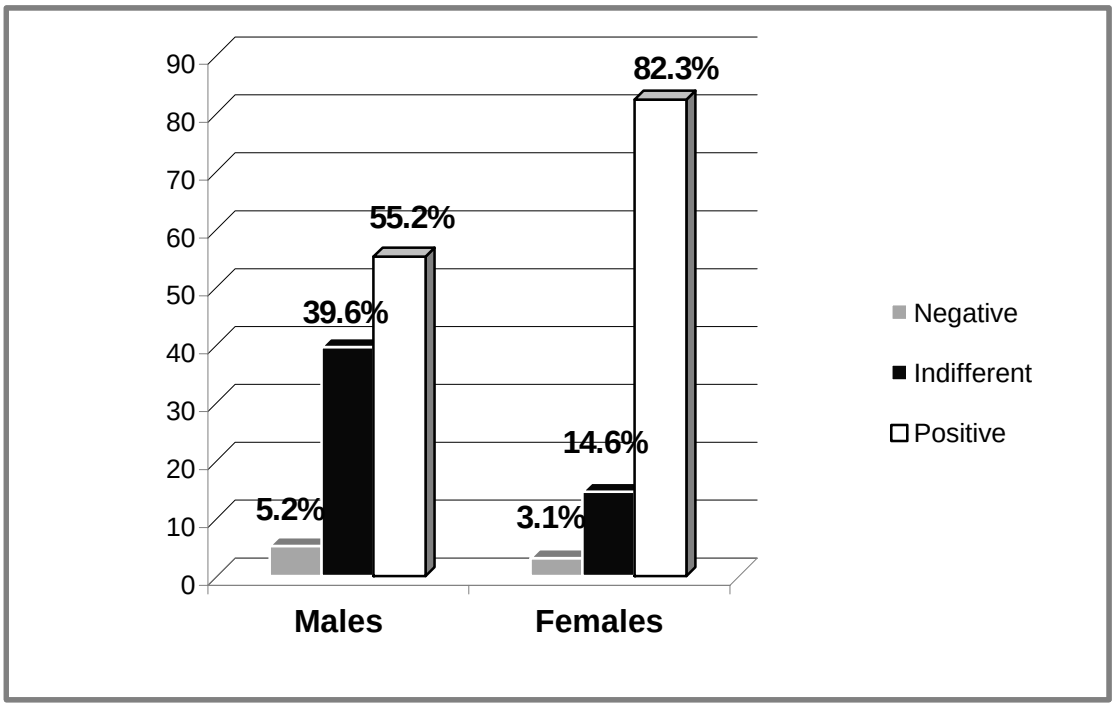

Figure (6): Distribution of the study sample by their sex and their Attitude toward premarital counseling and care (PMCC)

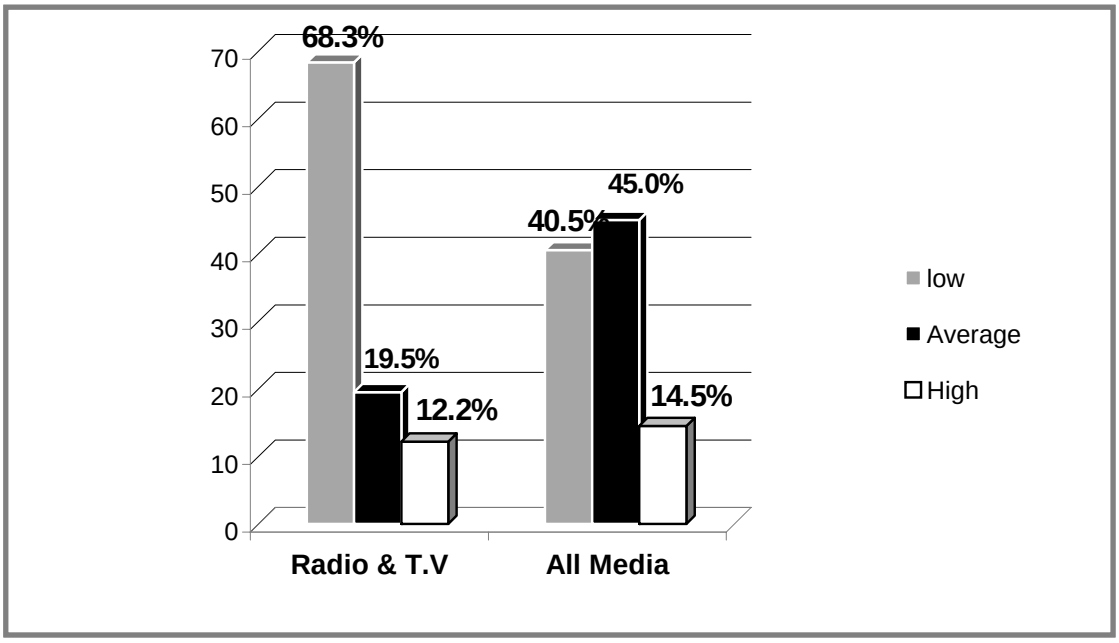

Figure (7): Distribution of the study sample by the mass media present in their home and their total level of knowledge about premarital counseling and care (PMCC).

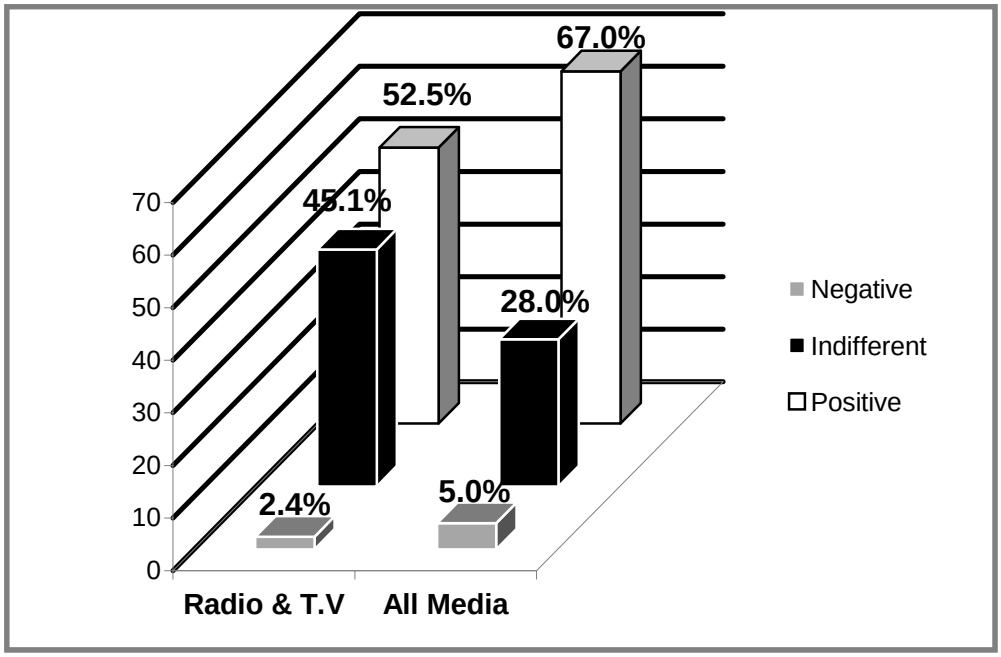

Figure (8): Distribution of the study sample by the mass media present in their home and their total of attitude toward premarital counseling and care (PMCC).

References:

1. **Abd El-Rahman SI, (2001):** "Knowledge and Attitude about Pre-MaritalCounseling among Zagazig University Students". Thesis Submitted to Master Degree, Faculty of Nursing, Zagazig University.
2. **Al Sulaiman A, Suliman A, Al Mishari M, Al Sawadi A, & Owaidah TM. (2008):** Knowledge & Attitude Toward the hemoglobinopathies premarital Screening program in Saudi Arabia: Population- Based Survey. vol 32 No. (6) pp. 531-538.
3. **Al-Arrayed S, Al Hajeri A. (2005):** Premarital Genetic Counseling: A New Law in the Kingdom of Bahrain, Journal of Health, Socia and Environmental Issues; 6(2): pp. 31-4.
4. **Al-Gazali L, Hamamy A, & Al-Arrayad S., (2006):** Genetic disorders in the ArabWorld. BMJ. Vol 333 No (21) pp. 831- 834.
5. **Al- Kahtani NH. (2000)**: Acceptance of premarital health counseling in Riyadh City 1417H. Journal of Family & Community Medicine; 7 (2): 27-34.
6. **Al-khaldi YM, Al-sharif AI, Sadiq AA & Ziady HH. (2002):** Attitude to premarital counseling among students of Abha Health Sciences College. Saudi Medical Journal 2002; vol.23 (8):986-990.
7. **Al-Khorasani, A. Al-Meir, A. Al-Griani, Mustafa, F., (2005):** Distribution of sickle cell Hemoglobinoopathy among Yemeni Stickler's at Sadah Governorate. The 13th congress of the union of the Arab Pediatric Societ. P139.
8. **Dabbous, NI, Tayel KY, Abd elhamid AA, Karboush IF & Attia SA. (1995):** Knowledge and attitude about premarital counseling among a group of Alexandria University students. Bulletin of High Institute of public Health; 25(1): 35-45.
9. **Frederikson MS., (2000):** "Rypins Intensive Reviews Obstetricsand Gynecology". Lippincott Williams & Wilkins Publisher, Philadelphia; 20-33.
10. **Gunaid AA, Hummad NA, and Tamim KA. (2004):** Consanguineous marriage in the Capital City Sana'a, Yemen; Biosoc SciJ; 36(1): pp. 111-21.
11. **Haider, N A A. (1997):** Sickle-cell disease Hajjaj, Yemen Republic (Abstract). In Symposium on disease in the Arab population. A wealth of indicative information, 23-24 November Riyadh, Saudia Arabia, College of Medicine, King Saud university.
12. **Long, L L. Burnett, J A. & Thomas, R V; (2006):** Sexuality Counseling. An integrative approach Upper Saddle River, NJ. Pearson Merril Prentrice-Hall.
13. **Mahmoud AA, Fikry FE and Okasha MS. (1994):** University students' awareness and attitudes towards premarital examination and counseling in Alexandria. The New Egyptian Journal of Medicine.11 supplement 1st October; 241-250.
14. **Ministry of Public Health & population. Hadhramout City,Yemen, (2009).**
15. **Mitwally N, Abd El-Rahman DA, and Mohamed N., (2000):** "Premarital counseling: view of the target group" The Journal of the Egyptian Public Health Associ, Lxxxv; pp. 31-51.
16. **Schumm WR, Resinck G, Silliman B and Bell DB. (1998):** Premarital Counseling and marital satisfaction among civilian wives of Military services Members. Journal of sex and marital therapy; 24(21): 20-28.
17. **Whitehead D., (2004):** Health promotion and health education: Advancing the concepts. Journal of Advanced Nursing, 47(3): pp. 311-320

معلومات وإتجاهات طلاب جامعة حضرموت عن التوعية (المشورة) قبل الزواج

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مقدمة:
التوعية أو المشورة والفحص الطبى قبل الزواج من الأنشطة الهامة التى تقوم بها مراكز رعاية الأمومة والطفولة، وهذه الخدمة تقدم إلى المقدمون على الزواج بغرض إرشادهم وإعدادهم لتكوين أسرة سليمة خالية من الأمراض، وعدد قليل من المقدمون على الزواج يعتبرون التوعية قبل الزواج مهمة جدا لأن فرص إعداد الشباب والفتيات للزواج والوظيفة الانجابية ضعيفة جدا فى اليمن.

الهدف من الدراسة:
تهدف هذه الدراسة إلى معرفة ومقارنة معلومات وإتجاهات طلاب جامعة حضرموت للعلوم والتكنولوجيا عن التوعية (المشورة) قبل الزواج.

السؤال البحثى:
هل طلاب جامعة حضرموت للعلوم والتكنولوجيا لديهم معلومات وإتجاهات عن التوعية (المشورة) قبل الزواج؟

طرق البحث:
التصميم البحثى: دراسة مقارنة وصفية.

مكان البحث:

أجريت هذه الدراسة فى جامعة حضرموت للعلوم والتكنولوجيا بين طلاب الكليات العملية والكليات النظرية فى مدينة المكلا- محافظة حضرموت - اليمن.

عينة البحث:

اشتملت عينة الدراسة على ٤٠٠ طالب وطالبة: ٢٠٠ طالب وطالبة من الكليات العملية (كلية الطب والعلوم الصحية- كلية التمريض) ، ٢٠٠ طالب وطالبة من الكليات النظرية (كلية الآداب – كلية العلوم الإدارية) من المقيدين بالمستوى الأول والنهائى للعام الجامعى ٢٠٠٩م- ٢٠١٠م.

أدوات البحث:
اشتملت أدوات البحث على أداتين تم تصميمهما بواسطة الباحثين وهما:
١. أستمارة أستبيان لجمع البيانات الشخصية ولمعرفة معلومات الطلاب نحو التوعية والفحص الطبى قبل الزواج.
٢. وقد تم استخدام مقياس ليكارت ذو الثلاث أبعاد لقياس اتجاهات الطلاب نحو التوعية والفحص الطبى قبل الزواج.

نتائج البحث:
أسفرت الدراسة عن النتائج التالية:

- بالنسبة للمعلومات العامة عن التوعية وجد أن نسبة من الطلاب الذين لديهم معلومات صحيحة وكافية عن التوعية والفحص الطبى قبل الزواج (٢٢,٥ %) من الكليات العملية، (٥,٥ %) من الكليات النظرية.
- كانت نقاط الضعف عند الطلاب فى تعريف التوعية ومكوناتها والتطعيمات التى تأخذها الفتاة قبل الزواج وكذلك الأماكن التى توجد بها هذه التوعية الصحية.
- أظهرت نتائج الدراسة أن حوالى ثلثى الطلاب من المجموعتين كانت لديهم اتجاهات إيجابية نحو التوعية قبل الزواج والفحص الطبى. وكانت نسبة ضئيلة جدا منهم (٤,٥ %) اتجاهاتهم سلبية.
- وعلى الرغم من وجود أتجاهات إيجابية إلا أن المعلومات الخاصة بالتوعية قبل الزواج والفحص الطبى غير كافية.
- وقد وجد أيضا أن موافقة طـلاب كليـات المجموعة العملية لحضور محاضرة عـن التوعية قبل الزواج تـشير إلـى نقـص معلوماتهم عن هذا الموضوع رغم وجوده

فى مقرراتهم الدراسية.

- كذلك أظهرت نتائج الدراسة أن معلومات واتجاهات الطالبات الإناث كافية وصحيحة بنسبة (٢٣,٨ %) بينما الطـلاب الـذكور بنسبة (٩,٣ %) عن التوعية والفحـص الطبي قبل الزواج.
- وتبين أيضا من النتائج أن وسائل الإعـلام فى المنزل لهـا تـأثير علـى معلومـات واتجاهـات الطـلاب نحـو التوعيـة أو المشورة قبل الزواج.
- وعلى الرغم من ذلـك أوضـحت هـذه الدراسة أن السن والإقامـة وتعلـيم الأب والأم ووظيفتهما ليس لهـم تـأثير علـى معلومات واتجاهات الطلاب نحو التوعيـة والفحص الطبى قبل الزواج.
- وقد وجدت فروق ذات دلالة احـصائية بين معلومات و اتجاهات الطلاب فـى الكليات العملية و النظرية.

و بناء على نتائج الدراسة، فقد أوصت بـالآتى:

١. إجراء خدمات التثقيف الصحى حول المشورة قبل الزواج فى كل كلية.
٢. تقديم التثقيف الصحى حول المـشورة قبـل الزواج للطلاب خلال الفحص الطبـى قبـل دخول الجامعة.
٣. يجب على الخدمات الجامعية توزيع كتيـب عن الفحص قبل الزواج و أماكن تقديم هـذه الخدمة.

Measuring Nurses' Compliance with Patients' Safety Measures during Hemodialysis at Minia University and General Hospitals

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Abstract:

Background: Keeping patients safe while in the dialysis environment is a topic of great concern for patients and nurses. The most significant barrier to improve patient safety is a lack of awareness of the extent to which errors occur daily in all health care settings. There are many possible causes for patient injury within the dialysis environment. The process of providing dialysis treatments includes the use of medications, chemicals, machinery, and physical activity on the part of the patient. When time constraints and staffing difficulties are added to the equation, it is understandable how and why injuries occur. **Aim of the study**: Measuring nurses' compliance with safety measures of patients with hemodialysis. **Methodology**: Three different tools were used to collect study data. These were questionnaire sheet, an observation checklist and an attitude scale. The study sample included all nurses working in hemdialysis units (23 nurse in Minia University and 25 nurse in general hospitals) in the period from the 1st of January to the 30th of May 2009.of May 2009. **The result indicated that**, there is a correlation matrix among nurses' scores of performance, knowledge and their years of experiences .it points out statistically significant positive correlation between years of experiences and knowledge in nurses' working in University hospital. **Conclusion**: The results obtained from the study revealed that the nurses not comply with patients' safety measures at hemodilaysis unit and part of this non compliance was affected by lack of some resources and commitment with universal precautions in both hospitals included in the study. Periodical or annual training program for all nurses about compliance with safety measures as regard performance of all procedure in hemodilaysis unit is recommended.

Keywords*:* Patient safety, Hemodialysis, Nurses' compliance

Introduction

Nowadays, patient safety is one of the Nations' most health care challenges, there is increasing number of patients who die in hospitals each year as the result of lapses in patient safety practice **(Rockville, 2004).** Improving patient safety, remains a health care organizational challenge, compared to other industries with highly reliable processes, health care baseline process reliability is low and patient safety solutions continue to be a high demand, while studies have examined implementation of individual patient safety intervention, little has been studied or published on the theoretical framework of patient safety system implementation in health care institution **(Resar, 2006).** Over the past 3 years, The Agency for Health Care Research and Quality (AHRQ) has invested $ 165 million on patient safety researches, the agency currently manages a patient safety research of more than 100 projects, driven by user needs, and most of these projects

include a practical risk assessment and threat identification component **(Grant & Rockville, 2004**). Safety emerges from the interaction of the health systems' component; it does not reside in a person, device or department. Improvement that requires understanding technical work and identifying organizational factors that influence the safe work conduct (**Carrie, 2006**). **Institute of Medicine (2004)** shows that Patient safety is fundamental to quality health and nursing care, believes that the enhancement of patient safety involves a wide range of actions in the recruitment, training and retention of health care professionals, performance improvement, environmental safety and risk management, including infection control, safe use of medicines, equipment safety, safe clinical practice, safe environment of care, and accumulating an integrated body of scientific knowledge focused on patient safety.

Patient safety is a priority, as keeping patients safe while in dialysis environment is a topic of great concern for patients and health care providers, even caring and competent health care professionals make errors, this is difficult part of human being, being costly in term of both patient suffering and medical care **(Kliger &Diamond, 2001).** Patient safety is a major concern of health practitioners, nurses are knowledgeable worker whose main responsibility is to provide safe and effective care so it is very important for the nurses to believe in and comply with patients' right for having safe care. Nurses address patient safety in all aspects of care. This includes informing patients about risk and risk reduction, advocating for patient safety and reporting adverse events **(Dunn. et al., 2008**). The reported annual incidence of End Stage Renal Disease (ESRD)(2006) in North Africa countries including Egypt ranges between 34 and 200 million population [PMP],but Egypt ESRD incidence per million is 200 patient (**Rashad, 2008**). These incidences are very high and still increasing as the number of patients with end stage kidney failure in Egypt is twice than of international rates which are 100 patients per million populations **(Kamoun, Jawahdou & Hachicha, 2006).**

Compliance is an observable behavior that can be directly measured and is a description of submission to predetermined goals **(Ragab, 2008).** Moreover, in Egypt, various studies in the patient safety field have been conducted however; less attention has been focused on handling patient safety issues from the front-line perception **(Abdullah. et al., 2008).**

Aim of the study:

Measuring nurses' compliance with safety measures of patients with hemodialysis.

Research question:

1. What is the level of nurses' knowledge and attitude about safety measures?
2. To what extent do nurses apply these safety measures in the work place?

Subjects and Methods

Study Design:

The present study is a descriptive one.

Setting:

The study was carried out at dialysis unit in both Minia University and General Hospitals.

- University hospital includes 28 beds, 22 beds for positive HBV and 6 beds for negative HBV.
- General hospital includes 23 beds, 12 beds for positive HBV, 4 beds for negative HBV and 7 beds for pediatric hemodilaysis.

Subjects:

The study subject consisted of all nurses working in the designated sites. The total number included in the study was **48** (university hospital **23** and general hospital **25**).

Tools:

Three different tools were used to collect study data. These were questionnaire sheet, an observation checklist and an attitude scale.

1. **Questionnaire:** consisted of two parts:-

A) Demographic Data: Include information about the nurses working at hemodialysis unit in both Minia University and General hospitals as age, marital status, and qualification, attendance of training programs and also years of experience.

B) Nurses' knowledge: it was developed to collect the data related to assess nurses' knowledge regarding renal failure and safety measures for hemodialysis patient and consist of the following parts:

- **First part** consists of: Safety for renal failure patient in hemodilaysis unit (4 items) and renal failure and hemodilaysis process (5 items.)
- **Second part** consists of: Infection in hemodialysis and infection control methods (7 items).
- **Third part** consists of: Policies and procedures applied in hemodilaysis unit, (4 items).

Scoring system:

The questionnaire sheet was scored as (0) for incorrect answer and (1) for correct answer.

2. **Observation checklists:** This tool was adopted from **Ragab (2008);** the tool consists of two parts:

- **The first part**: is measuring the availability of resources needed for nurses' to comply with patient safety measures and consists of (7 items).
- **The second part**: is observation checklist and consists of the following: Hand washing procedure (10 items), I.V medication administration procedure (13 items), Wearing gloves procedure (8 items) and removing gloves procedure (7items).

Scoring system:

The **first part** is availability of resources needed for compliance with patient safety measures and consists of seven items with scoring system (Used-Not used –Not available), with scoring system (3, 2, 1), respectively, the cut point for satisfactory is set at 60% of the total score .

The **second part** is observation checklists with score system (Done correctly- Done incorrectly –Not done), with scoring system (3, 2, 1), respectively, the cut point for satisfactory is set at 60% of the total score.

3. An attitude scale:

This tool is to assess nurses' attitude regarding patient safety measures during hemodialysis.

Scoring system:

It consists of 18 positive and negative statements, the response will be measured by using a (3) points likert scale "agree, uncertain, disagree". With scoring system (3, 2, 1).

The scoring is reversed for negative statements. The cut off point for satisfactory is set as 60% of the total obtained score.

Administrative and Ethical consideration:

Prior to data collection the necessary approval was secured from the director of both hospitals (university and general) at Minia city. The purpose of the study was explained to nurse and the consent to participate in the research was taken

Filed work:

The present study was carried out within six months started from the 1st of January to the 30th of May 2009. The data was collected by the researcher herself through interviewing nurses for collection of demographic data, questionnaire sheet. The time required to complete the questionnaire was about (20 -25) minutes.
Observation of each nurses' performance three times for selected nursing procedures was carried out at different shifts and checking availability of resources needed for carrying out nursing procedures which help in facilitating compliance with safety measures.

Pilot study

A pilot study was carried out to assess tools clarity and applicability. It applied on five nurses from the selected hospitals that excluded from the main subjects of the study. Data collected from the pilot study were analyzed and necessary modifications were done prior to the final application of the study tools.

4- Statistical analysis:

Data entry was done using excel computer soft ware package. Statistical analysis was done using: descriptive statistics in the form of frequencies and percentages were calculated using a computer software package (SPSS version 11). P value of ≤ 0.05 was considered significant.

Results

Table (1) revealed that the characteristics of the nurses in the study at both University and General hospitals in Minia, from the table all General hospital nurses are females, while only about one third of University hospital nurses are females, the majority of both University and General hospitals are married, having a diploma qualification and nearly about half of them with the age less than 40 years and years of experiences in hemodialysis units less than 20 years, also the table shows that more than two-third of the study sample attending training program.

Figure (1) presents a correlation matrix among nurses' scores of performance, knowledge and their years of experiences .it points to statistically significant positive correlation (p=.05*) between years of experiences and knowledge in nurses' working in University hospital, while there is no correlation between years of experiences and performance, or knowledge in nurses' working in General hospital.

Table (2) illustrates mean score of nurses' knowledge regarding Renal Failure and Safety Measures in hemodialysis unit in both University and General Hospitals, nurses working in General hospital have the highest mean score for all questionnaire items, there is a significant statistical difference in nurses' knowledge regarding Safety for patient with renal failure and nurses' knowledge about policies and manual procedures which is applied in hemodialysis unit (P=0.001).

Figure (2) illustrates mean score of nurses performance in hemodialysis units in both University and General Hospitals in Minia, the mean score was high for all nursing

procedures carried out by nurses for patients before, during and after hemodialysis at the general hospital.

Table (3) shows nurse's compliance with patient safety measures during hemodialysis at Minia University and general Hospitals that, the highest percentage of nurses working in both University and general Hospitals agreed about complying with all items of patients' safety except items of the patient has right to make his decision related to his care plan, the nurses' compliance with universal precautions is not' necessary for hemodialysis patient, caring with hemodialysis patient does not need so much information and revising the prepared medication with the prescribed one before administration is not important they disagreed.

Figure (3) illustrates availability of resources at hemodialysis unit in both University and General Hospitals at Minia that the highest percentage at (100%) of resources in both units is not available (paper towel near the sink or single use cloth towel, enough number of blood pressure apparatus for measuring patients' blood pressure during hemodialysis and Special equipments near the patient for personal use)**.**

Discussion:

Patient safety is a major concern for all healthcare providers. It appears perverse that patients can suffer harm when they are being treated and cared for them. This has been recognized since the time of the physicians of Ancient Greece and Rome 'First, do no harm' **(Sandars & Cook, 2007).** The present study was carried out on (48) nurses, which revealed that the majority of them are females, nearly all of them are married, having a diploma qualification and nearly about half of them with the age less than 40 years and years of experiences in hemodialysis unit less than 20 years, also more than two-third of the study sample attending training program about patients' safety and infection control precautions.

Mainly hemodialysis staff qualification as level of education and years of experience affect on the level of the provided care, as years of experience should affect positively on the level of nurses' performance and also on their knowledge, the more years of experience the more knowledge and effective performance the nurse should have, it appears that there is no correlation between years of experiences and knowledge or performance in nurses working in General hospital.

This finding was consistent with **Mark (2005**) who recommended that registered nurses should possess two years of clinical experience and one year of dialysis maintenance experience to achieve the targeted clinical outcomes for each patient **Ball** and **Douglas** (**2002)** noted also that negative outcomes often were due to lack of education, experience, training and direction from one who is responsible of nursing services**.** More over nursing experience is a moderating factor affecting the patient safety, **Armistead, Tokars** and **Light (2000)** found that nursing staff inexperience directly caused or contributed to 10 % of all adverse incidents reported.

A Canadian study found that as years of nursing experience increased, the numbers of patients' deaths decreased **(Ann & Pageb, 2004).** Also the education level of nursing staff has been identified in the literature as a moderating factor that influences the effect of nurse staffing on patient outcomes, as two studies by **Hickam,**

Severance and **Feldstein (2003)** have suggested that baccalaureate-prepared nurses are more likely to demonstrate professional behaviors important to patient safety. It is clear from the study finding that the nurses working in General hospital have the highest mean score for all questionnaire items as they had more correct knowledge about all questionnaire parts as the meaning of safety, infection control precautions, chronic renal failure as a disease, hemodilaysis process and hemodilaysis manual procedure, as there is a significant statistical difference in Nurses' knowledge regarding safety for patient with renal failure and nurses' knowledge about policies and procedures applied in hemodialysis unit**.**

This finding was consistent with the results of **Shigeko (2009)** who demonstrated that the nurse promotes advocates and strives to protect the health, safety and rights of the patient and **Savitz, Kaluzny** and **Kelly (2005)** mentioned that nursing staffs are critical to patients' safety, as they deliver more individual patient care than any other single health care provider. This finding is consistent with **National Patient Safety Agency (NPSA) (2008)** which demonstrated that the quality of the care which should be introduced for the patient in hemodilaysis unit must be high quality care which maintains an efficient dialysis service**. CDC (2008)** emphasized also that well trained nurses play a vital role in providing safe and high-quality patients' care**.**

The study results are in agreement with **CDC (2003**) which stated that Clinical care staff and other health care workers are the frontline defense for applying daily infection control practices to prevent infections transmission. **JCAHO(2007)** stated that nurses have the unique opportunity to directly reduce health care–associated infections through recognizing and applying evidence-based procedures to prevent HAIs .Related to the mean score of nurses performance in hemodialysis units in both University and General Hospitals in Minia the study revealed that there is high mean score for nurses' performance working in General hospital for all nursing procedure carried out for the patient before, during and after hemodialysis.

The reason of low mean score for nurses' performance working in University hospital mostly due to lack of training programs absence of procedures manual in the unit and lack of nursing supervision provided by head nurse This was in accordance with **JCAHO (2006)** which stated that dialysis unit must have written plans that guide nurses' performance regarding hemodialysis process. **Rockville** and **PikeSuite (2007**) stated that hemodilaysis unit facility must have written policies Rules and procedures to minimize the possibility of patient injury which are essential parts of the patients' safety initiative. Nurse's compliance with patients' safety measures during hemodialysis at Minia University and general shows that the majority of nurses working in both hemodialysis unit disagree that the patient has right to make his decision related to his care plan. This is may be due to their believes that the patient has no medical back ground which enables him to make correct choice regarding his plan of care.

This finding was in consistent with the results of **JACHO (2006)** who emphasize that patient should be actively involved in decisions about his care and is able to accept or refuse specific treatments, and also indicates

that when patients actively participate in their overall healthcare management, medical errors are reduced**. Canadian Council on Health Services Accreditation (2007)** was dedicated that empowering patients, through education, to make informed decisions enable patient responsibility which improve the medical care that impacts lives emphasized that an educated patient is one who can actively participate in her or his care, and who assumes some responsibility.

National patient safety agency (2008) discussed that the patients have the right to speak up and engage with providers in discussions concerning health care, be educated, be informed, and understand choices in the management of their health care. In this study the majority of nurses working in both hemodialysis units agreed that they should immediately report the physician for any complication happened to the patient during hemodilaysis**.** This finding was consistent with **a subcommittee of the South African Society (2008),** stated that informing physicians promptly of any problems happened to the patient is very critical point in keeping patients' safety, as reporting systems are a fundamental link in patients' safety initiatives, promptly report events or situations of actual or potential protection of patient against harm. It is clear from the results that all nurses working in both University and General Hospitals disagree that the nurses' compliance with universal precautions isn't necessary for hemodialysis patient. This finding was consistent with the result of **Levy, Morgan** and **Brown (2004)** which emphasized that nursing staff must take adequate precautions to prevent the spread of infection and this is achieved through the use of Universal Precautions. Each dialysis unit must have infection control policies. Also **(CDC, 2001)** publicized that hemodilaysis unit must have and follows standard infection control precautions. It is clear from the study results that there are shortages of some of the needed resources in hemodialysis unit in both hospitals which may be disabling factor which affect the nurses' compliance with patients' safety measures**.**

Camins & Fraser (2005) emphasized that at least 50% of all medical equipment in most of developing countries is unusable, or only partly usable. Making equipment and appropriate resources were available, so that each individual's duties can be completed without causing injury to patients. There is a relationship between the nursing performance and the availability of resources in hemodiaylsis an extensive review by **Uliukin, Vedmad** and **Voronin (2003)** and colleagues found more than 600 studies demonstrated the impact of resources on nurses' performance which affect on safety and quality outcomes of patients and staff **(Kerm et al., 2007).**

Conclusions and Recommendations: The results obtained from the study revealed that the nurses not comply with patients' safety measures in hemodilaysis unit at both University and General Hospitals and part of this non compliance affected by lack of some resources and commitment with universal precautions in both hospitals included in the study.

Consequently in the light of the present study results, **the following recommendations will be suggested:**

- Making and providing education aids (e.g. posters) to enhance infection control

practice for health care personnel or to the patient.

- Orientation program for all newly nurses and in services training program for experienced nurses about renal failure, the methods of treatment and hemodilaysis machine
- Periodical or annual training program for all nurses about compliance with safety measures for performance of all procedures in hemodilaysis unit.
- Availability of a written policy and manual procedures for nurses to be aware of handling any problems that may be arises.

Table (1): Socio demographic Characteristics for nurses working at hemodialysis unit in both Minia General and University Hospitals (n=48).

Characteristics	Study site				Total	
	University (N=23)		General (N=25)			
	No	%	No	%	No	%
Marital status						
-Single.	2	8.7	3	12	5	10.4
-Married.	21	91.3	21	84	42	87.5
-Divorced.	-	-	1	4	1	2.1
Sex						
-Male	16	69.5	-	-	16	33.3
-female	7	30.5	25	100	32	66.7
Age						
->20.	2	8.7	-	-	2	4.2
-20	2	8.7	14	56	16	33.3
-30	12	52.2	11	44	23	47.9
-< 40.	7	30.4		-	7	14.6
Educational qualification						
-General diploma.	22	95.7	23	92	45	93.8
- Diploma plus specialty.	-	-	1	4	1	2.0
-Diploma of technical institute.	1	4.3	1	4	2	4.2
Years of experience in hemodialysis unit.						
-< one.	-	-	1	4	1	2.08
-1	6	26.1	15	60	21	43.75
- 10	16	69.5	9	36	25	52.09
->20.	1	4.4	-	-	1	2.08
Attendance of any training program about safe nursing care						
- Yes.	12	52.1	21	84	33	68.8
- No.	11	47.9	4	16	15	31.2

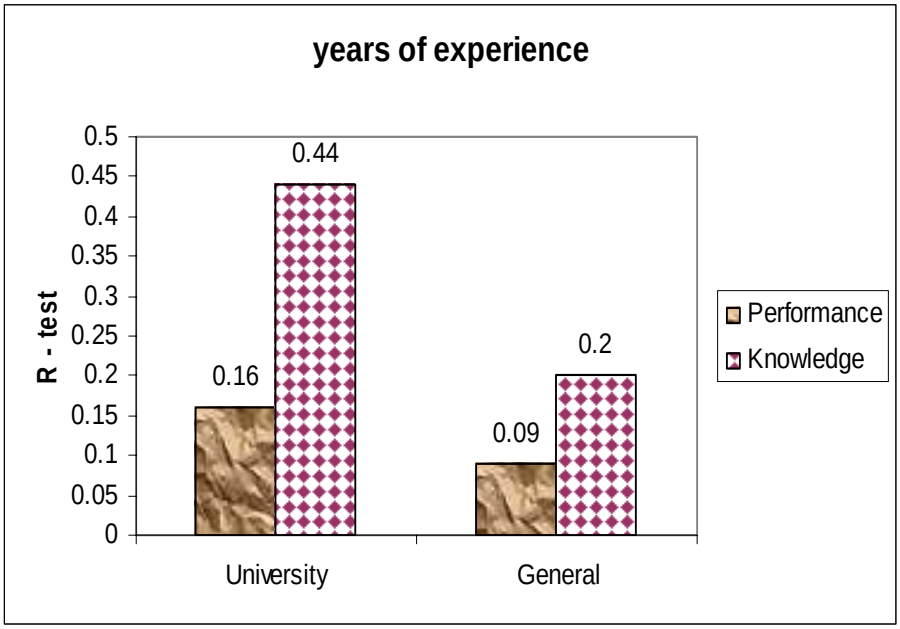
Table (2): Mean score of nurses knowledge regarding Renal Failure and Safety Measures in hemodialysis unit in both University and General Hospitals in Minia (n=48).

Statement	University N =23	General N =25	T- test	P
	Mean± S.D	Mean± S.D		
• Nurses' knowledge regarding Safety for patient with renal failure.	3.0±1.1	3.9±.40	-3.82	.00*
• Nurses' knowledge regarding renal failure and hemodilaysis process.	4.6±.9	4.7±.43	-.51	.60
• Nurses' knowledge regarding spread of Infection in hemodialysis.	3.4±.7	3.5±.71	-.39	.69
• Nurses' knowledge regarding Infection control in hemodialysis unit	2.5±.7	2.8±.37	-1.80	.07
• Nurses' knowledge about policies and procedures applied in hemodialysis unit.	3.0±3.4	7.4±.82	-6.43	.00*

Table (3): Nurse's attitude toward patient safety measures during hemodialysis at Minia University and General Hospitals (n=48).

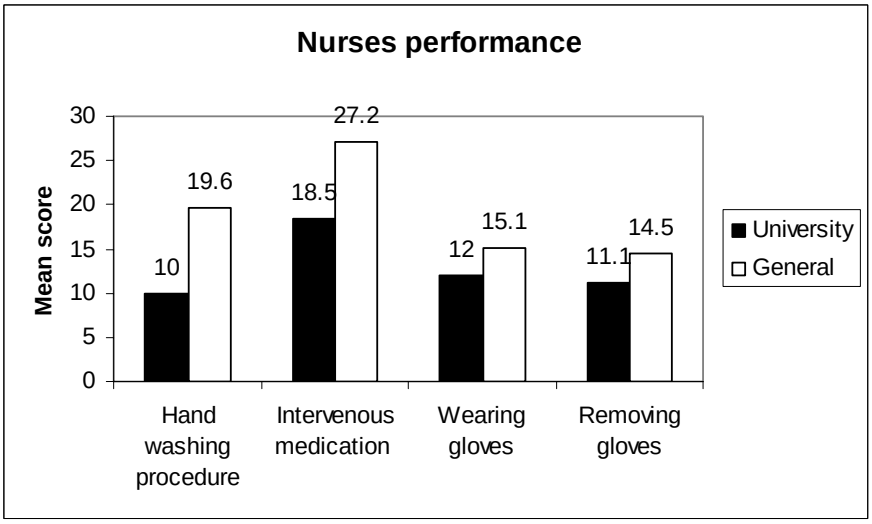
Statement	Hospitals												X^2	P
	University(n=23)						General(n=25)							
	Agree		Uncertain		Disagree		Agree		Uncertain		Disagree			
	No	%	No	%	No	%	No	%	No	%	No	%		
1-My duty as a nurse is just giving nursing care and not protecting the patient from harm	23	100	-	-	-	-	21	84.0	-	-	4	16.0	4.01	.04*
2- Providing health education for the patient is nursing responsibility.	23	100	-	-	-	-	25	100	-	-	-	-	-	-
3-Do you think that religion, color or gender is not reason for differentiation between any patients.	20	87.0	1	4.3	2	8.7	24	96.0	-	-	1	4.0	1.61	.44
4- Does the patient have the right to express his pain.	22	95.7	-	-	1	4.3	25	100	-	-	-	-	1.11	.29
5- Do you think that the patient has the right to be answered for all his questions related to his health status.	19	82.7	1	4.3	3	13.0	19	76.0	4	16.0	2	8.0	1.92	.38
6- Does The patient have the right to make his decision related to his care plan.	6	26.1	3	13.0	14	60.9	10	40.0	4	16.0	11	44.0	1.42	.49
7- Do you think the patient has the right to use his own personal utilities in the unit as" food, drink, radio".	13	56.5	6	26.1	4	17.4	10	40.0	8	32.0	7	28.0	1.41	.49
8-I think that the nurses' explanation for the patient about the importance of commitment with regular hemodialysis is necessary.	22	95.7	1	4.3	-	-	24	96.0	1	4.0	-	-	.00	.95
9-It is important for the patient to know the signs of inflammation of A.V shunt.	21	91.3	2	8.7	-	-	23	92.0	-	-	2	8.0	4.01	.13
10- Special training program for improving safe nursing care in hemodialysis unit is very important.	22	95.7	1	4.3	-	-	25	100	-	-	-	-	1.11	.29
11-I think that the nurses' compliance with universal precautions is not' necessary for hemodialysis patient.	-	-	-	-	23	100	-	-	-	-	25	100	-	-

12- It is necessary to wash hands between the patients and the other during and after hemodialysis connection and between any procedure and the other.	22	95.7	1	4.3	-	-	25	100	-	-	-	-	1.11	.29
13- I think that caring with hemodialysis patient does not need so much information.	8	34.8	2	8.7	13	56.5	7	28.0	2	8.0	16	46.0	.29	.86
14-It is easy to learn from my companion in the unit how the hemodialysis machine works.	18	78.3	1	4.3	4	17.4	21	84.0	2	8.0	2	8.0	1.14	.56
15- Revising the prepared medication with the prescribed one before administration is not important.	6	26.1	-	-	17	73.9	11	44.0	-	-	14	56.0	1.68	.19
16-Accurate medication recording in hemodialysis unit is necessary.	23	100	-	-	-	-	24	96.0	-	-	1	4.0	.94	.33
17- Notifying the doctor about any complication occurred to the patient during hemodialysis is important.	23	100	-	-	-	-	25	100	-	-	-	-	-	-
18-It is necessary to record any complication happened to the patient during hemodialysis in the designed records.	19	82.6	-	-	4	17.4	25	100	-	-	-	-	4.74	.02*
Total mean	18.4	80.4	1.1	4.4	3.5	15.2	20.5	82	1.2	4.8	3.3	13.2		



P value ≤ 0.05

Figure (1): Partial correlation matrix for score of nurses' performance, knowledge and years of experience



P value ≤0.05

Figure (2): Mean score of nurses' performance in hemodialysis units in both University and General Hospitals in Minia (n=48).

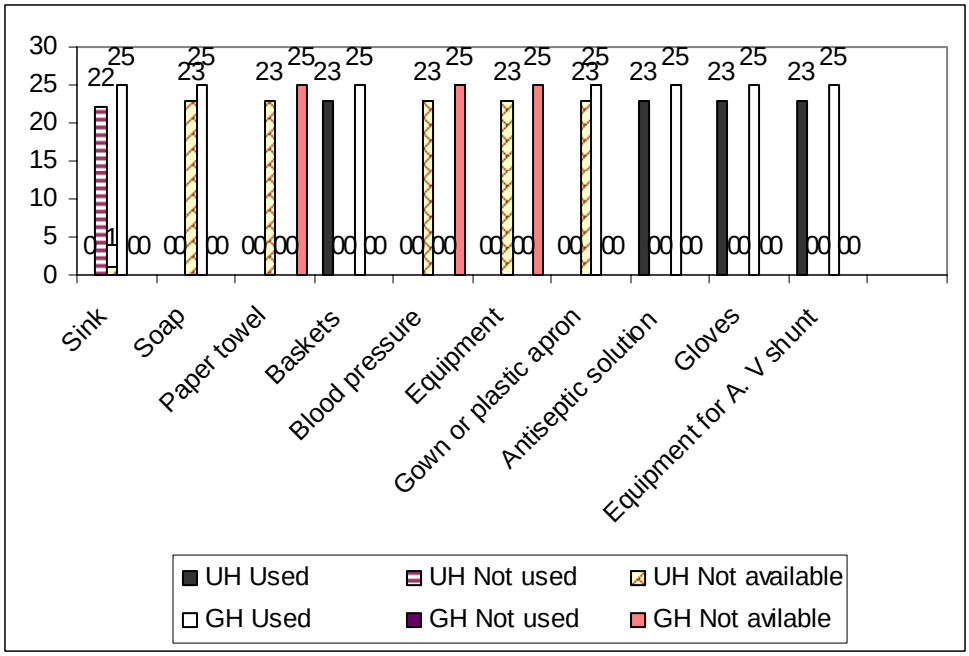


Figure (3): Availability of Resources at hemodialysis unit in both University Hospital (HU) and General Hospital (GH) in Minia

References:

1. **A subcommittee of the South African Society, (2008)**: Guidelines for the Optimal Care of Patients on Chronic Dialysis in South Africa.
2. **Ann, E. & Pageb K., (2004):** Practice Implications of Keeping Patients Safe. Transforming the Work Environment of Nurses. National Academy of Sciences, 2nd ed. Chapter (22): 122-134.
3. **Armistead, N.; Tokars, JI. & Light, P. (2000**): Surveillance for infections in hemodialysis patients: a pilot study [Abstract]. Infect Control Hosp Epidemiol (21):10-11.
4. **Abdullah A; Abbas** E; **Bassiun N; & Baddar F. (2008):** Perception of Front-line Healthcare Providers toward Patient Safety: A Preliminary Study in Cairo University Hospital, Master degree in medical and surgical nursing thesis.
5. **Ball M. J. & Douglas J. V.** (**2002**): "Patient Safety and Quality Care." Journal of Healthcare Information Management; 16 (1): 28–33.
6. **Camins, B. & Fraser, V. (2005):** Reducing the risk of health care associated infections by complying with CDC hand hygiene guidelines. Journal of Nursing Management; 31(3):17-39.
7. **Canadian Council on Health Services Accreditation (2007):** CCHSA Patient/Client Safety Goals and Required Organizational Practices: Evaluation of Implementation and Evidence of Compliance
8. **Carrie, C. (2006**): NPSF announces patient safety research and development agenda, Nursing English Journal ;(10): 2-4.
9. **Centers for Disease Control and prevention**, **(2001):** Centers for Disease Control and prevention. Campaign to prevent antimicrobial resistance in health care settings: Why a Campaign? Atlanta, GA: centers for Disease control and prevention; 2001. Available at: http://www.cdc.gov/ drug resistance/ health care/ problem.htm; Accessed March 6: 1-2
10. **Centers for Disease Control and prevention, (2003)**: Guidelines for infection control in dental health care settings. Morbidity and mortality weekly report; 52(RR17):1-16

11. **Centers for Disease Control and prevention. (2008)**: Campaign to prevent antimicrobial resistance in healthcare settings: 12 steps. Available at: http://www.cdc.gov/ drug resistance/ healthcare/..Accessed January 2008.
12. **Dunn, MG., Norby, R.; Cournoyer, P.; Hudec, S.; O'Donnell, J. & Snider, MD. (2008):** Expert panel method for nurse staffing and resources management. Journal of Nursing Administration 25(10): 61-67.
13. **Grant, K. & Rockville, MD. (2004):** Patient safety challenge grants, Agency for Healthcare Research and Quality, No.4 Patient Safety Challenge Grants. Fact Sheet. No. 04-P013, March 2004.http://www.ahrq.gov/qual/ptsfchall.htm
14. **Hickam, DH.;Severance, S. & Feldstein, A. (2003):** The effect of health care working conditions on patient safety. Report/Technology Assessment Medical Care, 41(1), 142-52.
15. **Institute of Medicine. (2004):** Patient Safety: Achieving a New Standard for Care. Washington, DC: The National Academies Press.4th ed, 25:74752.
16. **Sandars J. & Cook G. (2007):** ABC of Patient Safety, The Scope of the Problem: 3rd ed. chapter 1, Page 1 to 2.
17. **Joint Commission on Accreditation of Health Care Organizations, (2006);** Joint Commission Perspectives on Patient Safety, , Volume 6, Issue 3: 1-2
18. **Joint Commission on Accreditation of Healthcare Organizations, (2007):** Setting the Standard for Quality in Health Care setting standard The Joint Commission and Health Care Safety and Quality. Available @60181 www.jcaho.org
19. **Kamoun, A.; Jawahdou, F. &Hachicha, J. (2006**): End-stage chronic kidney failure in children in Tunisia, Arch Pediatrics 4th ed., Pp196.
20. **Kerm, H, Elizabeth. D, Margaret, A., Keyes, P, Carayon. & Ronda, H. (2007);** Understanding Adverse Events: A Human Factors Frame work Patient Safety and Quality: An Evidence-Based Handbook for Nurses, 2nd ed., JAMA 293: 238-490.
21. **Kliger, AS. & Diamond, LH. (2001**); Patient Safety in End Stage Renal Disease: How Do We Create a Safe Environment? Advances in Renal Replacement Therapy; 8, No 2: 131-137.
22. **Levy, J, Morgan, J & Brown, E. (2004):** Oxford Handbook of Dialysis, management guidelines for all aspect of dialysis 3rd Edition Copyright Â © Oxford University Press; P. 984.
23. **Mark, M. (2005)**: Administrator Centers for Medicare and Medicaid Services Department of Health and Human Services Attn: CMS; 3818-P Washington, DC 20-21 RE: Conditions for Coverage for End Stage Renal Disease Facilities - (CMS; 3818-P): Proposed Rule May 5, 2005.
24. **National Patient Safety Agency (NPSA). (2008):** Building a Memory: Preventing Harm, Reducing Risks and Improving Patient Safety.4th ed, London: NPSA. Accessed March; 15(3), 1121.
25. **Ragab.G, (2008):** Measuring compliance of nurses working in fever hospitals with isolation precautions, Master thesis, Faculty of Nursing, Assuit University. P 11-13.
26. **Rashad, S, B. (2008**): End-stage renal disease in North Africa End- RJ Gray, JAMA 249:31848.
27. **Resar, RK. (2006):** Making no catastrophic health care process reliable, M J 41, p 1677-1689.
28. **Rockville, MD. (2004):** Reported, Five steps to safer health care, Dialysis corporation of America Announces Acquisition of Pennsylvania dialysis July 12, 2004; (http://www.ahrq.gov/consumer/5 steps.htm) Agency of health research quality.
29. **Rockville, MD. & PikeSuite. (2007):** Dialysis Safety: What Patients Need To Know Renal Physicians Association, 5th ed. Dialysis Corporation of America Announces

Acquisition of Pennsylvania Mar, 20, p 694-0500.

30. **Savitz, LA.; Kaluzny, AD. & Kelly, DL. (2005):** A life cycle model of continuous clinical process innovation. Health Manage; 45(5):307-15.
31. **Shigeko (Seiko) (2009)**: Roles and reward of journal peer. Reviewers Japan journal of nursing science vol. 6 No.2 p 67-69
32. **Uliukin, I.; Vedmed, E. & Voronin, E. (2003)**: Quality of life of mothers having nosocomial HIV infected children in Russia. AHRQ Publication, 25; 11: 47-5**2**

قياس التزام الممرضات بخطوات العناية الآمنة للمرضي أثناء الغسيل الكلوي في مستشفيات المنيا الجامعي والعام

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مقدمة:

الحفاظ علي سلامة المريض في وحدة الغسيل الكلوى هو موضوع هام لكل من المرضي والتمريض، ومن أهم المعوقات الجوهرية لتحسين سلامة المرضي نقص المعلومات التى تشير إلى معدلات حدوث الأخطاء يوميا في جميع الهيئات الصحية والمستشفيات.

تشمل عملية الغسيل الكلوى إعطاء المريض العلاج اللازم واستخدام الأدوية والمواد الكيميائية ، والآلات ، و هى من الأسباب المحتملة لحدوث العدوى داخل وحدة الغسيل الكلوي ، هذا بالاضافة الى ضيق الوقت والصعوبات التى تواجه التمريض أثناء العمل.

الهدف من هذه الدراسة:

قياس مدي إلتزام الممرضات باتباع خطوات العناية التمريضية الآمنة في وحدة الغسيل الكلوي لمرضي الفشل الكلوي المزمن.

طرق البحث:

أجريت هذه الدراسة فى مستشفى المنيا (الجامعى و العام) بمحافظة المنيا و اشتملت عينة البحث على 25 ممرضة من مستشفى المنيا العام و 23 ممرضة من مستشفى المنيا الجامعى اللاتى يعملن بوحدة الغسيل الكلوى.

أدوات البحث:

وقد استخدمت ثلاث أدوات لجمع بيانات البحث:

1. استمارة استبيان
2. استمارة ملاحظة
3. قياس اتجاهات

نتائج الدراسة:

أظهرت نتائج الدراسة أن هناك علاقة ارتباط إيجابى بين سنوات الخبرة و المعرفة لدى الممرضات اللاتى يعملن فى مستشفى المنيا الجامعى. كما تبين أن معظم الممرضات لا يلتزمن بالاجراءات التمريضية الآمنة لمرضى الغسيل الكلوى لقلة الموارد اللازمة لاتمام العمل الآمن بالوحدة وهذا وجد فى مستشفيات المنيا (الجامعى و العام).

فى ضوء نتائج الدراسة أوصت النتائج بالاتي:

1. توفير الوسائل التعليمية (مثل الملصقات) لتعزيز مراقبة منع العدوى للعاملين في الوحدة أو للمريض ووضعها في مكان ظاهر.
2. عمل برنامج توجيهى لجميع العاملين بوحدة الغسيل الكلوى سواء جدد أو ذوى خبرة عن الفشل الكلوي، طرق علاجه وكيفية عمل ماكينة الغسيل الكلوى.
3. برنامج تدريبي لجميع الممرضين عن الالتزام بتدابير السلامة أثناء أداء جميع الإجراءات التمريضيه المتبعة بوحدة الغسيل الكلوى.
4. توفير لائحة و كتيب للإجراءات التمريضية حتى يمكن التعامل مع ما يطرأ من مشكلات

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