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**IMPACT OF EFFECTIVE ORGANIZATIONAL COMMUNICATION  
CLIMATE ON NURSES' COMMITMENT AND THE QUALITY OF NURSES  
PERFORMANCE IN SELECTED HOSPITALS.**

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***Abstract***

In all nursing organizations, the issue of maintaining employee commitment is a major concern to managers. This is due to its potential impact on morale, quality of patient care, and productivity (Mc Neese -Smith, 1997). Communication is a central part of nursing practice. It is important in the delivery of effective and appropriate nursing care (Naish, 1996). The aim of the study was to identify the impact of effective organizational communication on nurses' commitment and the quality of nurses' performance in selected hospitals. The present study was done at two different sectors. One of them was governmental sector and the other one was private sector. Random sample of 85 nurses of different level of education and experience working in these two sectors were included in the study. Three tools collected data. First, Slater scale developed by Wandelt and Stewart (1980), it was used to measure nurses' performance. Second one, organization communication inventory developed by Costigan and Schmeidler (1981). The last one, the organization commitment questionnaire developed by Cook and Wall (1980), O'Relly and Chatman (1986), and Ersen Kerger et.al (1986) in Brewer and Lok (1995). The finding of the study revealed that, there was statistical significant difference between two different hospital sectors and nurses' performance and organization communication. While, there was no statistical significant difference between the two different hospital sectors and nurses' commitment In relation to demographic variables, there was relation between nurses' performance and their age, experience and marital status. While, there was no relation between organizational communication and nurses demographic variables except pattern of work shift and method of nursing assignment. Also, there was no statistical relation between nurses' commitment and their demographic variables except overtime payment and nurses' experience in present place of work. The findings of the present study revealed that, there was no statistical significant correlation between the quality of nurses' performance, and organizational communication and commitment. While, there was statistical significant correlation between organizational communication and nurses commitment. Recommendations are made in the light of these findings.

## Introduction

The communication climate in any organization is a key determinant of its effectiveness. Organizations with supportive environments encourage worker participation, free and open exchange of information, and constructive conflict resolution. In organizations with defensive climates, employees keep things to themselves, make only guarded statements, and suffer from reduced morale (Costigan and Schmaidler, 1981).

Therefore organizational communication is the establishment and use of a system to transmit information therefore conveying meaning to large numbers of people both within and outside the organization. Organization communication as stated by Torrington and Weightman (1993), is not all communication that takes place in the organization, but simply which, is a product of deliberate attempts by managers to communicate or enable specific communication within the organizational structure and to the outside environment.

Whitely and Pulitzer (1994) has concluded that the reason for burnout were dissatisfaction with salary and unsatisfactory communication with supervisors. Good communication is the basis of good nursing performance and proper teamwork it is the care of all elements of management (Abd El Sattar, 1986). Communication is not just the exchange of information, but it includes components that help establish mutual respect and maintain autonomy (Naish, 1996, Salem 1997 and Orange & Ryan, 2000).

A sense of belonging among individual will be promoted through communication, it allow them to learn desirable identity characteristic and make decisions congruent with group norms, value, and ideals. For example, by communicating with senior nurses, less- experienced RNs “learn the ropes” of their jobs and understands what it means to be a nurse. Such interactions build strong relational connections and may influence a new nurse to have a strong professional affiliation (Apker, Ford and Fox, 2003).

Supportive communication that creates trust and expresses appreciation remains an important practice on behalf of organizational leaders and ultimately, supportive communication from managers and Co-workers can be critical to retain nurses in their organizations and their occupation (Garrett & McDaniel, 2001 and Mc Phee & Scott, 2002).

Supportive communication from managers and Co-workers is particularly helpful in buffering nurses from strain as well as providing nurses with informational and emotional resources to cope with work stressors. In addition to faster nurses’ organizational and professional identification (Ford & Ellis, 1998 and Apker, Ford & Fox, 2003). Further, supportive communication helps create environments in which nurses build the communication skills that enable them to perform their jobs (Laschinger et al., 2001 and Laschinger, Shamain & Thomson, 2001).

The concept of communication is an essential component in achieving organizational commitment. It is important to note that this communication must be bi-directional- that is, information must continually flow between employee and organizational management to nurture high level of commitment. Whereas individuals must clearly understand the goals, value, and needs of the organization, the organization must also clearly understand the goals, value, and needs of the individual. This can only be accomplished through effective communication (Zangaro, 2001).

When individual comes to an organization for interview, the employer must clearly communicate the goals and values of the organization to the prospective employee. Individuals who come to an organization have specific needs, goals, and skills and expect to use their abilities to meet organizational goals as well as their own basic needs.

Organizations should focus on clearly defining an employee's role and providing an employee with challenging and meaningful experiences to increase attachment and commitment to the organization. When an organization communicates honestly and openly, builds a trusting relationship, and offers a sense of belonging to the employee, the organization will increase the likelihood of retaining a morally committed employee (Zangaro, 2001).

The study findings of Apker, Ford and Fox (2003) also point to the benefits of creating supportive workplace settings to foster nurse organizational and professional identification. Regarding organizational identification, results illustrate the importance of manager and co-worker social support in building nurse attachment with the hospital.

Nurses who identified with the hospital were individuals who believed they had colleagues and managers who were easy to talk to, listened to problems, and could be relied on when work life got difficult. This finding complements earlier research highlighting the importance of ongoing relational support to fostering feeling of being valued and appreciated by members of social networks (Garrett and McDaniel, 2001).

Moreover Apker, Ford and Fox (2003) found that, nurses who believed they receive supportive communication in work relationships were more likely to feel a membership in the greater social network of the hospital. Thus, it is suggested that hospital and nurse leaders develop supportive work climates that are characterized by trust, respect, and openness as a way to promote nurse identification.

For example, regularly scheduled "town hall" meetings between staff nurses, managers, and administrators would provide nurses with opportunities to receive messages of appreciation, share information and provide feedback, "vent" complaints, and resolve conflicting issues. Increasing nurse participation in decisions that affect patient clinical outcomes and perhaps, hospital operations, may also improve nurse organizational identification.

In today's dramatically restructured health care work environments, organizational trust is an increasingly important element in determining employee performance and commitment to the organization (Laschinger et al, 2000). Nursing commitment is defined as the strength of an individual's identification with and involvement in particular organization (Huber, 2000)

Alternatively, Wise (1999) has defined commitment as a state of being emotionally impelled, feeling passionate about, and dedicated to a project or event. Commitment is characterized by a number of desirable outcomes including a strong belief in and acceptance of the goals and values of the organization, a willingness to work hard for the organization, and a desire to maintain membership in the organization (Ingersoll et al., 2000).

Corser (1998) and Dunn (1998) conclude that, acute care nurses with a high level of organizational commitment cope better or assist their coworkers in coping with demands of stressful work shifts. Lee and Henderson (1996) added that, work experiences describe experiences related to group attitudes and perceptions of personal investment in and worth to an organization. Job characteristics include job challenge, opportunities for social interaction, and feedback concerning an employee's work performance.

Aim of the study: the aim of the study was to identify the impact of effective organizational communication on the quality of nurses' performance and nurses' commitment in selected hospitals.

## Methodology

**Design:** A descriptive correctional design was used for this study.

**Setting:**

This study was conducted at two hospitals affiliated to two different sectors, governmental and private.

**Subject of the study:**

The subjects were a convenient sample of (85) bedside nurses working in the selected hospitals.

**Data collection instruments:** The data of the present study was collected through utilizing the following instruments:

- [1] The first instrument was the Slater nursing competencies rating scale which developed by Doris Slater Stewart in Wondelt and Stewart, (1980). It consists of 83 items that identify actions performed by nursing personnel as they provide care for patient. 18 actions directed toward individual psychosocial needs, 13 actions related to group psychosocial need, 13 activities to satisfy physical needs, 16 operations to meet the general needs, 6 communication on behalf of patients, and 17 professional implications. The scale includes. (3) High performance, (2) Average performance, (1) Poor performance. The first part of this instrument include the socio demographic characteristics , indication items which elicited information on various demographic characteristics e.g. age, years of experience in the current place, educational level.
- [2] The second instrument is the organizational commitment questionnaire this questionnaire based on two inventories, the organizational commitment questionnaire and the perceived organizational support questionnaire developed by Cook & Wall (1980), O'Reilly & Chatman (1986), and Ersen Kerger et.al (1986) in Brewer and Lok (1995). The scale consists of (69) items divided into 4 dimensions, each set of the (4) dimensions comprising (10) subclass. The dimensions consists of: **1-** feeling about the organization (14) items, **2-** Relationship with managers (19 items), **3-** Participation within the organization (12 items), **4-** Career and investment (20 items). The scale was rated along five point likert scales (5-1). The responses where (5) strongly agree to (1) strongly disagree.
- [3] The third instrument is the organizational communication climate inventory, developed by Costigan and Schmeidler (1981). The scale consists of 36 items divided into two dimensions: (1) defensive climate, and (2) supportive climate. The thirty-six questions are presented in a Likert response format. The odd-numbered questions describe a defensive atmosphere and the even-numbered questions describe a supportive environment.

## Procedure:

An official permission from the hospital administrators was obtained for data collection. To identify the staff nurses perceptions toward the organizational communication climate and organizational commitment, the researcher explained the aim of the two questionnaires to the staff nurses before distributing sheets. The two , questionnaires were handed to each staff nurse individually and were collected in the same day.

To assess the quality of nurses' performance, the researcher and assistance of baccalaureate graduates working at the selected settings did an intermittent observation for the staff nurses during three shifts. The observation had been done for every nurse for nine times for each item, three times every shift, one observation in the beginning, one in the middle and the third time at the end of the shift to have the chance of inclusion of different unit routine

activities . If the nurse performed the item for six times, she got the response which indicates her performance of action. Data collection process extended for six months and completed at February 2004.

Statistical design: statistical analysis of the collected data was done using inferential statistical tests that were used to investigate correlates of organizational communication, nurses' performance and commitment among the studied subjects.

## Result of the study

Findings of the study showed the following results, as regards the demographic data of the staff nurses. The highest percentage of the staff nurses were working in the private sector (60%), while the rest of staff nurses (40%) were working in the governmental sector. Highest percentage (48.2%) of staff nurses age ranged between (20-25) years, while the lowest percentage (12.94%) of staff nurses age was ranged between (30-35) years old.

Highest percentage (38.89%) of staff nurses had years of experience in nursing ranged between (1-5) years, while the lowest percentage (5.8%) had years of experience in nursing ranged between (10-15) years. The majority (47%) of staff nurses had years of experience in the current place ranged between (1-5) years, while the minority (9.4%) of staff nurses had years of experience in the current place ranged between (10-15).

Regarding the type of working shift, the highest percentage (85.8%) working in rotating shifts, while (14.2%) had fixed shift. Regarding the method of assignments, the highest percentage (54.1%) were utilized the team method, while the lowest percentage (15.2%) were utilized the functional method of assignment.

**(Table 1):** One way ANOVA revealed that there was a significant difference between the governmental and private sectors regarding the perceived organizational communication climate ( $f = 11.22$ ,  $p = 0.001$ ). The highest mean score (Mean = 110.47, SD= 26.26) was related to the governmental sector, while the lowest mean score was related to the private sector (mean= 96.56, SD= 11.30).

The results revealed that there was a significant difference between the selected sector ( $f= 6.22$ ,  $p= 0.015$ ) regarding the quality of nurses performance, the highest meanscore was related to the private sector (Mean = 296.9, SD= 51.77), While the lowest means score was related to the government sector (Mean = 267.11,  $p= 57.31$ ).

**(Table2):** Two- way ANOVA revealed that there were significant differences between the quality of nurses' performance and their following demographic data, age ( $f= 4.236$ ,  $p= 0.008$ ), marital status ( $f= 5.45$ ,  $p= 0.022$ ), years of experience in nursing ( $f=4.885$ , $p=0.001$ ), years of experience in the current place ( $f=3.97$ ,  $p= 0.01$ )

Moreover, results indicated that there was significance statistical relation between the perceived organizational communication climate by staff nurses in the selected sectors and their demographic data. Type of shift work ( $f= 4.26$ ,  $p=0.017$ ) and the applied method of assignment ( $f=3.374$ ,  $0.039$ ). In addition, results revealed that there were significant differences between nurses' commitment and their demographic data, years of experience in the current place ( $f=3.415$ ,  $p= 0.021$ ) and over time payment ( $f=3.76$ ,  $0.014$ ).

**(Table 3):** As regard the correlation between the staff nurses' commitment and the quality of their performance. Results indicated that, there was no significance difference between the staff nurses' commitment and the quality of nurses' performance. Moreover the result revealed that there was a positive significant correlation between the feeling about the organizations as perceived by staff nurses in the selected sectors and the quality of nurses' performance ( $r=$

1.750,  $p = 0.029$ ).

**(Table 4):** Indicated that there was no correlation between the organizational communication climate in both defensive and supportive climates as perceived by staff nurses and their quality of nurses performance ( $r = 0.712$ ,  $p = 0.474$ ), ( $r = 1.224$ ,  $p = 0.22$ ) respectively.

**(Table 5):** showed that there was correlation between both defensive and supportive climates as perceived by the staff nurses and their commitment. Moreover, findings indicated that there was highly correlation between both of the defensive and supportive climates as perceived by the staff nurses in the selected sectors and their participation within the organization ( $r = 2.157$ ,  $p = 0.034$ ) ( $r = 5.053$ ,  $p = 0.000$ ) respectively.

### **Discussion and conclusion:**

The study finding revealed that, there is statistical significant difference between different sectors and the organizational communication climate, with the highest mean to the governmental sector. It could be due to the fact that nurse in this sector may feel more secure than in private sector which influence close communication with their managers.

On the contrary managers in private sector may apply polices and discipline rules strictly which may have a negative effect on communication. Also, the different sectors affect the quality of nurses' performance, with the higher mean to the private sector; it could be due to the previous interpretation about strict system of supervision. In addition to have the right to five unacceptable performers, which was reflected on commitment to the organization of the two sectors.

The finding of the present study revealed that, there is no statistical significant correlation between effective organizational communication and demographic variable expect methods of nursing assignment and their pattern of work shift. While Sullivan and Decker (1997) mention many factors affecting communication include nurses' experience, gender, qualification and environmental setting.

Concerning nurses' commitment, the finding revealed that there was no statistical significant correlation between nurses' organizational commitment and their demographic variables except experience in present place of work and overtime payment. It could be due to decreasing of nurses' satisfaction with the organization.

In contradiction with these finding, Lee and Henderson (1996) and laschinger (2000) stated number of personal characteristics which influence staff commitment, such as age, gender, educational and need for achievement. Additionally, the study of McNeeese Smith (1995) contradicts the results of the present study in that the age affects the organizational commitment. Moreover, Abd El-Aal (1999) supported the finding of the present study and found no statistically significant association between nurse' age and their commitment.

As regards the nurses' qualification, on the contrary to the present study findings, Abd El-Hammed (2003) has found that nurses' education affects commitment. The finding of the present study is in accordance with GLisson and Durick (1998) who found that nurse education not affects commitment. When the years of experience in nursing practice was investigated in relation to nurses' commitment, the finding revealed that there was a statistically significant relation between them.

This finding is in accordance with Abd El-Hammed (2003), who explained by the fact that when nurses gain more experience, they may be encouraged to give-up seniority and the reputation of being an expert on a particular ward, and thus become increasingly committed to the organization. On the contrary, Abd-El Fatah (2002) could not reveal any statistically

significant association between the years of experience in nursing and participants' commitment. Moreover, Laschinger et al (2000) added that commitment to stay in the organization is based on perceived lack of other job opportunities

When the relation between nurses' performance and organizational communication was examined in present study, the finding revealed that there was no statistical significant correlation between them. In contradiction to the present finding Baile et al (1997), Vaidya et al (1999), Zakaria (2001), and Apker, Ford & fox (2003), finding reported that, there was statistically significant relation between the nurses performance and their communication.

The present study finding reveled that, there was no statistical significant correlation between nurses' performance and their commitment except in feeling dimension of commitment. In this respect, there are differentials in the level of staff commitment in an organization. Laschinger (2001) has found that highly committed staff differ from less committed staff in a number of characteristics. Desirable characteristics, which serve to enhance the organization's ability to achieve goals, are job seeking, job satisfaction, job involvement, job performance, and agreement with the mission of the organization. Therefore, highly committed staff is high performers, are more involved in their job, are less likely to leave organization for new job, exhibit less absenteeism, posses high motivation to perform at their work, and express high job satisfaction.

In the present study, there was statistical significant correlation between nurses' commitment and defensive and supportive communication climate. In the same line, Laschinger et al. (2001) have found that work environments that provide access to information, support, resources, and opportunity to learn and develop, are empowering and influence employee work attitudes, productivity and organizational commitment. Moreover Abd El-Hammed (2002) found that, mores than two fifths of the nurses were uncertain of their satisfaction with the support of supervisors in general. This might be related to the lack of communication between nurses and their managers.

In addition, Zerwekh and Claborn (1998) had reported that positive job feeling is a result of interaction of personal characteristic value and expectations during supervision in the work setting. Also Zangaro (2001) conclude that, enhancement of organizational commitment will occurring by improving communication among staff nurse and their mangers. Supporting the present study findings, Beaulien et al (1997) have studied the mangers' behavior on nurses' support, open communication, and climate of trust, they have found that their behavior positively influence the organizational commitment of staff nurses.

Moreover McNeeseSmith (1997) had reported that the unappreciative and non-supportive manger's behavior to nurses, and also associated with poor communication have negative influence on commitment. This finding supported by Apker, Ford, and Fox (2003) who found a relation between supportive communication and organization commitment. Brewer and Lok (1995) have explained that, employees are more likely to become committed to organization when they feel a sense of trust between management and themselves.

In conclusion, the result of the present study had indicated that, there was statistical significant difference between two different hospital sectors and nurses' performance and organizational communication. While, there was no statistical significant difference between two different hospital sectors and nurses' commitment. In relation to demographic variables, there was relation between nurses' performance and their age, experience and marital status. While, there was no relation between organizational communication and nurses demographic variables except pattern of work shift and method of nursing assignments. Also, there was no statistical relation between nurses' commitment and their demographic variables except overtime payment and nurses' experience in present place of work.

The findings of the present study revealed that, there is no statistical significant correlation associated between quality of nurses' performance and their communication. Otherwise, there was statistical significant correlation associated between nurses' performance and feeling dimension of commitment. Also there was a statistical significant correlation between nurses' commitment and their supportive and defensive climate of organizational communication:

### Recommendations:

- 1- Effective organizational communication skills must be improved through encouragement for seminars and workshops.
- 2- Nurses' leaders must conduct formal and informal periodical meeting with their staff nurses to discuss and solve their problems to develop mutual trust.
- 3- Managers should have training programs on how to create a conducive work environment for nurse to improve their moral, satisfaction and commitment to their job.
- 4- Skill training program for nurses especially in governmental hospitals to improve quality of nurses' performance, which will reflect on their organizational commitment

**Table (1): Comparison of effective organizational communication climate, quality of nurses' performance and commitment in the different sectors (No. = 85)**

Variables	Sector				d.f = 1	
	Governmental No. 34		Private No. 51			
	X	SD	x	SD	F	Sig.
1- Organization communication climate	110.47	26.26	96.56	11.30	11.220	0.001**
2- Quality of nurses' performance	267.11	57.31	296.90	51.77	6.220	0.015*
3- Commitment	235.4	30.01	241.94	23.15	1.250	0.266

Level of significance  $P < 0.05$

\*\* Highly significant

\* Significant

**Table (2): Comparison between staff nurses demographic data and their perception of the organizational communication climate, quality of nurses' performance and commitment in the different (No. = 85)**

Demographic variables	Organizational communication climate		Quality of nurses performance		Nurses commitment	
	F value	P	F	P	F	P
- Age	0.153	0.928	4.236	0.008**	0.326	0.807
- Educational level	0.026	0.974	0.844	0.434	1.993	0.143
- Marital status	0.857	0.357	5.450	0.022*	0.135	0.714
- Years of experience in nursing	2.289	0.067	4.885	0.001**	1.395	0.243
- Years of experience in current place	0.557	0.645	3.970	0.011*	3.415	0.021*
- Type of shift work	4.264	0.017*	1.262	0.288	1.741	0.182
- Over time payment	0.495	0.687	1.590	0.197	3.760	0.014*
- Used method of assignment	3.374	0.039*	0.732	0.484	1.957	0.148
- Organizational structure	0.929	0.399	0.342	0.711	0.669	0.515

**Table (3): Correlation between the staff nurses commitment and the quality of nurses' performance (No. = 85)**

Commitment dimensions	R	P	Sig.
1- Feeling about the organization	1.750	0.029*	Sig.
2- Relationship with the managers	0.748	0.457	N.S
3- Career and investment	0.038	0.970	N.S
4- Participation within the organization	0.388	0.694	N.S
<b>Total dimension</b>	1.603	0.113	N.S

**Table (4): Correlation between the perceived organizational communication climate by staff nurses and the quality of nurses' performance (No. = 85).**

Quality of nurses performance dimensions	Organizational communication climate			
	Defensive climate		Supportive climate	
	R	P	R	p
1- Meeting psychosocial needs of individual patients.	0.441	0.625	1.159	0.250
2- Meeting psychosocial needs of patients member of a group	0.720	0.470	0.133	0.895
3- Meeting physical needs of patients.	0.327	0.744	0.308	0.759
4- Meeting general needs	0.590	0.557	0.382	0.704
5- Communication skills.	0.518	0.606	0.640	0.524
6- Professional implication	0.404	0.687	0.826	0.412
<b>Total dimension of nursing care performance</b>	0.712	0.479	1.224	0.224

**Table (5): Correlation between the perceived organizational communication climate by staff nurses and their commitment (No. = 85).**

Commitment dimensions	Organizational communication climate			
	Defensive climate		Supportive climate	
	R	P	R	p
1- Feeling about the organization	0.804	0.424	0.063	0.950
2- Relationship with the managers	0.757	0.451	1.396	0.167
3- Career and investment	1.254	0.214	0.980	0.326
4- Participation within the organization	2.157	0.034*	5.053	0.000**
<b>Total commitment dimensions</b>	1.927	0.050*	2.927	0.004**

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### الملخص العربي

#### تأثير الاتصال الفعال على جودة أداء الممرضات والتزامهن تجاه المنظمة في مستشفيات مختارة

إن الاتصال الجيد هو الأساس للتمريض الجيد والمتميز بجانب كونه جوهر كل العناصر الإدارية وكذلك العناية التمريضية الفعالة وتعتمد فلسفة التمريض حالياً على اعتقاد ان الاتصال ما هو إلا مفاهيم حيوية لجودة الرعاية التمريضية لذلك فقد ازداد التركيز في التعرف على مهارات الاتصال المختلفة التي تتبعها قيادات التمريض في السنوات الأخيرة وكذلك التعرف على مدى تأثير هذه المهارات على التزام المرؤوسين لتحقيق الأهداف والأداء المنشود في مجال العمل. وقد وجد أن الاتصال الفعال له علاقة قوية بمدى الالتزام الوظيفي للممرضات في تحقيق أهداف العمل الأساسية.

#### الهدف من الدراسة:

استكشاف تأثير طبيعة اتصال المنظمة الفعال على جودة أداء الممرضات ومدى التزامهن تجاه المنظمة.

#### عينة البحث:

أجريت هذه الدراسة على ٨٥ ممرضة من مختلف الخبرات والمؤهلات وكذلك مختلف المراحل العمرية. تعمل ٥٤ ممرضة في مستشفيات حكومي وباقي العينة في مستشفيات خاصة وقد تم جمع البيانات باستخدام الأدوات الآتية:

- ١- استمارة استبيان لمعرفة مناخ المنظمة.
- ٢- استمارة استبيان لمعرفة معدل الالتزام الوظيفي لدى الممرضات.
- ٣- قائمة ملاحظات لتقييم كفاءة أداء الممرضات.

#### نتائج الدراسة:

ومن أهم النتائج التي أسفرت عنها الدراسة

- أن طبيعة المناخ السائد في المستشفى الخاص هو المناخ الفعال "المساند" بينما يعم المناخ الدفاعي في المستشفى الحكومي.
- وجود علاقة إحصائية بين أداء الممرضات وطبيعة الاتصال بينهما.
- لا توجد علاقة إحصائية بين أداء الممرضات والتزامهن تجاه المنظمة إلا في محور الشعور نحو المنظمة.
- وجود فروق ذات دلالة إحصائية بين مستوى أداء الممرضات في المستشفى الخاص عنها في الحكومي.
- لا توجد فروق ذات دلالة إحصائية بين التزام الممرضات تجاه المنظمة سواء في المستشفى الخاص او الحكومي.
- هناك علاقة بين أداء الممرضات وخبرتهن وأعمارهن وأيضاً حالتهم الاجتماعية.

#### التوصيات:

توصى الدراسة

- بضرورة خلق مناخ من الأمان والثقة المتبادلة بين قيادات التمريض ومرؤوسيههم لزيادة الانتماء والالتزام نحو المنظمة.
- ضرورة عقد اجتماعات دورية مع الممرضات لمناقشة وحل مشاكلهن.

## QUALITY OF LIFE AMONG HOSPITALIZED AND NON HOSPITALIZED SCHIZOPHRENIC PATIENTS.

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### *Abstract*

Treating the schizophrenic disorders enhances patient's quality of life. However psychopathology and side effects of medication used to treat schizophrenia often have adverse side effects that decrease functioning, increase stigmatizing involuntary movements and impaired ability to interact socially, this may lead to the quality of life of schizophrenic logged behind. So this study was conducted to evaluate the factors affecting quality of life among schizophrenic patients. The study was conducted on 200 schizophrenic patients; 100 from inpatient and the rest from the outpatient clinic at Banha Hospital for mental health. Four tools were used for data collection: one to assess demographic and disease characteristics, one to measure quality of life, one to assess abnormal involuntary movements, and one to assess positive and negative symptoms. Results revealed that, the total mean score of positive and negative symptoms scale and abnormal involuntary movement scale had higher in outpatient than inpatient group, while total mean score of quality of life had higher in inpatient than outpatient group, there is a strongly, negative significant relation between total abnormal involuntary movement scale, total positive and negative symptoms and sum of quality of life. There is a strongly positive and significant relation between total positive and negative symptoms and sum of abnormal involuntary movements scale. It is recommended that, ensuring quality of life among schizophrenic patients by setting the appropriate standered of quality of life and enhancing the responsibilities placed on the health care professionals and the community

### **Introduction:**

Schizophrenia is a severe persistent mental disorder that consists of tow different categories of symptoms, classified as positive and negative (American Psychiatric Association 1994). Positive symptoms seem to reflect an distortion of normal functions including delusions, hallucinations, thought disorders, disorganized speech and disorganized or catatonic behavior (Kaiser et al., 1996). Negative symptoms appear to reflect loss of normal functions such as restriction or flattening in the range and intensity of emotion, reduced fluency and productivity of thought and speech, withdrawal and inability to initiate and persist in goal- directed activity, and inability to experience pleasure (Haber et al., 1997).

However (Knavagh, 1992) reported that schizophrenic symptoms can have a profound impact on patients' social performance and social skills. Thus, the ability of the patient to

conduct a full and productive life is often compromised, and the quality of life may be diminished. In this context, (Katschnig, 2000) emphasized that the impact of the degree and frequency of schizophrenic symptoms will affect the ability to function effectively in both hospitalized and non hospitalized patients.

The dramatic changes which have taken place in psychiatry over the last 50 years are intimately related to the treatment of schizophrenia, this treating revolution enhanced efficacy in the treatment of negative and positive symptoms, while the incidence of extrapyramidal side effects is increased (Katschnig, 2000).

However in treating and managing schizophrenia, clinicians often focus on controlling psychiatric symptoms (Awad, 1992, and Corrigan & Buican, 1995), overlooking outcomes regarding the side effects of antipsychotic medication that are more directly related to quality of life and that may be more important to both hospitalized and non hospitalized schizophrenics (Green et al., 2001).

Browne et al., (1998) and Rogers et al., (1998) revealed that the medications used to treat schizophrenia often have adverse side effects that decrease functioning, increase stigmatizing involuntary movements, and impair ability to interact socially, a matter which interferes with and threatens the quality of life.

However, many deinstitutionalized schizophrenics returned quickly to the hospital, on one hand because they had stopped taking neuroleptics due to embarrassing side effects, on the other hand because they were not used to coping with community stresses, such as life events and emotional environment of family members (Katschnig, 2000)

In the context of this study, quality of life refers to a construct which incorporates aspects of an individual's well-being and role functioning and the extent to which he/she has access to resources and opportunities (Lehman, 1996 and Browne et al., 2000). Today, quality of life should be regarded as a comprehensive concept, encompassing non-disease aspects of disease, which includes three dimensions: subjective wellbeing \ satisfaction, functioning in daily life, including self care and social roles, and external resources including standard of living and social support (Katschnig, 2000).

In consistent with the previous comprehensive concept of quality of life, psychiatric nurse plays a pivotal role in treating the patients with schizophrenia. Innovative strategies and collaboration with the patients, families, and other mental health professionals are the basis of successful treatment modalities that promote health, quality of life and minimize relapse among hospitalized and non hospitalized schizophrenics

It has been proved that schizophrenia and it's treatment had a great negative impact on every area of patient functioning. However, relatively less attention and little systematic evaluation is paid to quality of life for those patients. Therefore, it has become important to conduct this study which aimed to evaluate the factors affecting quality of life among hospitalized and non hospitalized schizophrenics

### **Aim of the study:**

The aim of the study was to evaluate quality of life and related factors among patients with diagnosis of schizophrenia

## Material and Methods:

### Research design:

A descriptive correlation design was utilized in this study

### Research setting:

This study was conducted in the inpatient and outpatient clinic at Banha Governmental Hospital for Mental Health. The hospital is affiliated to the Ministry of Health.

### Subjects:

A sample of convenience of 200 schizophrenic patients was recruited from inpatient and outpatient department

### Tools of the study:

Four tools were used for collection of data

1. Sociodemographic and medical data sheet  
This sheet was designed for collection of personal data such as patients age, gender, level of education, marital status, number of children, occupation, income, and place of residence. It has included queries about significant others, health history, duration of disease, number of admission, and type of treatment
2. Positive and negative symptoms scale (PANSS)  
The PANSS is widely used structured interview designed by Kay et al., (1987) to discriminate between positive and negative symptoms. Additionally it provides a separate score for general psychopathology, each of the positive and negative subscales consists of seven items: positive symptoms include delusions, hallucinations, and suspicion. While negative symptoms include blunted affect, withdrawal and lack of spontaneity. The PANSS general psychopathology scale assesses 16 items including symptoms of anxiety, depression, and impulse control separate scores are provided for negative symptoms, positive symptoms, and general psychopathology.  
The scale is a seven - point likert scale with response options of absent (1), minimal (2), mild (3), moderate (4), moderately severe (5), severe (6), and extreme (7). Higher represent greater severity of symptoms.  
Quality of life scale (QOL)
3. The scale was constructed by Lehman (1986) to assess the quality of life of chronic psychiatric patients. It consisted of 60 items divided into 4 subscales :-  
**First subscale:** comprised 13 items covering the general level of activity.  
**Second subscale:** consisted of 19 items reflecting self-care. It was divided into 4 groupings of items: - 4 items covering personal hygiene, 5 items representing grooming, 5 items reflecting patients' nutrition, and 5 items including patients' elimination.  
**Third subscale:** included 15 items, representing patients' emotional status.  
**Fourth subscale:** consisted of 13 items related to social and personal relationships. responses were measured on a 5- point likert scale, ranging from never(5) to always(1). The higher the scores, the better was the quality of life for all items except for reversed items number 6,8,16,19,28,29,48,55,56, and 57, in which the lowest the score, the better the quality of life.
4. Abnormal Involuntary Movement Scale (AIMS)  
A scale developed by Guy (1976) was used to assess the abnormal involuntary movements which are produced by prolonged use of anti-psychotic medications. The scale comprises 5 items includes facial and oral movements, extremity movements, trunk movements, global judgments and dental status. Each item consists of substatements that represent the abnormal movements related in severity from 1-5 1=non 2=minimal may be extreme normal, 3=mild, 4=moderate, 5=severe.

By summing the scores, higher scores represent greater severity of symptoms.

### Methods:

- Once permission was granted to proceed in the study, the researcher contacted with each patient individually. At time, the purpose and nature of the study were explained. Voluntary participation and confidentiality ensured.
- Before starting the data collection, the researchers observed the patients for about two weeks to form a general idea about patients' behavior. Moreover, the two expert psychiatrists and two trained psychiatric nurses helped the researchers during filling the questionnaire
- The study sample was divided into two groups; inpatient and outpatient department, 100 patients each.
- Each patient was interviewed individually for two consecutive sessions for about 30 to 45 minutes. For more validation of the information, patients' records were revised to help in completion of the needed information and to exclude the patients with other diagnosis rather than schizophrenia, alcohol or drug dependence, and patient with problem that affect motor functioning. Data collection was completed over four months started from February to May 2003.
- A pilot study was carried out before performing the actual study. The sample of the pilot study included (20) patients from Benha mental hospital and not included in the study. A pilot study was done to test study tools in terms of its clarity, time required to be applied, and a sample modification was done as revealed from a pilot study by omission and remodification of certain items

### Statistical analysis:

Descriptive measures used were: percent, arithmetic mean and standard deviation. Statistical tests significance used included: chi – square, F – test, t – test and regression analysis. The level of significance selected for this study was 0.05

### Results:

**Table (1)** shows the socio – demographic and disease characteristics of schizophrenics in both inpatient and outpatient group.. It appears from the table that mean age group was (33.9±8.3) years for the inpatient group compared to (37.5±8.1) years for outpatient group. It can be observed that more than half of the sample ( inpatient and outpatient) were single and males constituted the majority of the sample. Moreover the mean duration of illness was "(5.3±3.1) years for the inpatient group and (4.5±3.2) for outpatient group. Also the mean number of previous hospitalization was (3.0±2.2) for the inpatient group, and (3.8±2.7) for the outpatient group. In the same table the parents as significant one to patient constituted the highest proportion (about half) in the two patient groups.

**Table (2)** reveals the scores of positive and negative syndromes scale (PNSS), abnormal involuntary movement scale (AIMS) and quality of life scale (QOL) of patients in the two study groups. Outpatient group had higher scores of total PNSS (Mean±SD =110.9±27.6) than inpatient group (68±26.7). Also outpatient group had higher scores of AIMS (17.7±6.7) than inpatient group (14.9±5.2). On the other hand, inpatient group had higher score of total QOL scale (279.0±40.1) the outpatient group (219.1±30.5). All differences in this table are statistically significant (p<0.05).

**Table (3)** presents the Pearson correlation matrix coefficients of components of PNSS: This table demonstrated that negative and general symptoms had strongly statistically significant positive correlation with positive symptoms in both study group (p<0.001)

**Table (4)** demonstrates the Pearson correlation matrix coefficients of components of QOL

scale: There was strongly statistically significant positive correlation between components of QOL scale among two study groups ( $p < 0.001$ )

**Table (5)** illustrates the Pearson correlation matrix coefficients of score of PNSS, AIMS and QOL scale. It can be observed that the abnormal involuntary movement score was strongly, negatively and statistically significant correlated to quality of life scores ( $r = -0.28$ ), ( $p < 0.01$ ). Also, positive and negative syndrome scores had strongly negatively correlation to quality of life score ( $r = 0.84$ ), ( $p < 0.01$ ) and strongly statistically significant positive correlated to the AIMS

**Table (6)** displays the best fitting stepwise backward regression model for scores of positive and negative syndrome scale (PNSS) for the inpatient group as a dependent variable and various sociodemographic and illness characteristics: the finding revealed that the best predictors of this scores are the marital status (single) is negatively related to the PNSS scores (coefficient = -14.78); as the signally increased the PNSS scores is increased, also the PNSS scores is decreased with duration of illness increased (coefficient = -2.40), while the scores is increased with significant others (parent) (coefficient = 20.23).

**Table (7)** demonstrates that age, number of children, duration of illness and number of hospitalization are the best predictors of the abnormal involuntary movement impact. The model shows that as the age, duration of illness, and number of hospitalization increases, the score increases, while the scores decreases with the increases score of number of children among inpatient group (coefficient = -0.96). However, the model explains only 0.43% of the variation in the score ( $r\text{-square} = 0.43$ ).

**Table (8)** indicate that the number of hospitalization had positively and statistically significant correlated to quality of life ( $p = 0.030$ ). The number of children and PNSS scores had negatively and statistically significant correlated to QOL ( $p < 0.001$ ). on the other hand age, sex, marital status, education, job status, significant others, duration of illness, ECT, and AIMS are not significant and excluded

## Discussion

Severe mental illness such as schizophrenia often imposes a consequence of social difficulties as a result of psychotic symptoms, diminished insight, neurocognitive deficits and antipsychotic extrapyramidal Side effects, so the patients' quality of life may be impaired (Green et al., 2001).

The most important finding in this study was the inpatient group who reported high total mean score of quality of life than those for outpatient group. This may be due to the fact that the hospitalized patients are not faced by stressful situation and social problems. Also, they are not confronted with the stigma of being mentally ill from their society. Katschnig (2000) supported these findings and stated that, quality of life of schizophrenic patients living in the community is mostly lower than that of health control groups of the general population. Another explanation supported this result in the study of Green et al., (2001) who revealed that the influence of social stigma makes it difficult to the outpatient to achieve social acceptance and thereby well being a matter which impaired quality of life among those patients. This finding agrees with Barry & Crosby (1996) who found that the improvements in quality of life among hospitalized patients appear to be strongly related to the observed changes both in the standard of care environment and in the quality of the care provided.

Consistent with the present results (Samidha Sood et al., 1996) also reported that the hospitalized patients were in routine inpatient treatment programs, which included occupational, recreational and group therapy and so forth, this may be increased satisfaction with living

situation through improved living conditions, higher levels of social contact and increased leisure activities can lead to significant changes in quality of life among those inpatient group.

In contrary with the present result Barry & Zissi (1997) revealed that the non hospitalized schizophrenic patients who resided in community settings with support from their families and continue in after care clinic were found to be functioning at higher levels and higher quality of life rating than hospitalized schizophrenic patients because they were perceived as having more opportunities to practice every-day living skills. Agree with this viewpoint Susser et al., (1996) and Awad et al., (1997) added that involved the patient in every day living skills produces on increased level of personal interaction , these interactions create a better environment that exerts a direct and positive influence on wellbeing and overall aspects of quality of life .

The most unexpected result was that, the total mean scores of positive and negative symptoms and abnormal involuntary movements had higher in outpatient than inpatient group, this may be due to resigned the patient to inpatient treatment routine, as a result the symptoms were under control and abnormal involuntary movements were early detected and hence was early intervention. To proceed from the previous results we are able now to predict that improved quality of life for inpatient group was related to control of positive and negative symptoms and involuntary movements.

This result supported by Green et al.,(2001) who asserted that abnormal involuntary movement and positive and negative symptoms were associated with quality of life dimension but in negative direction. Therefore not unexpectedly this may study finding which refers to that is a strongly, negatively and statistically significant relation between total positive and negative symptoms and sum of quality of life.

Consistent with the present study Green et al., (2001) found that lower levels of psychiatric symptoms were associated with lower levels of distress which in turn lead to higher levels of quality of life and vice versa.

While antipsychotic medication may improve the patients functioning and quality of life in some ways, the extra pyramidal side effects, personal and social consequences of having been designated severely mentally ill may erode whatever benefits accrue from the treatment of psychotic symptoms (Norman et al., 2000). This fact agrees with the present study finding which refers to there is a strongly negatively, and statistically significant relation between total abnormal involuntary movements and sum of quality of life.

This result was interpreted by Green et al., (2001) who reported that conversely, while medications may make it possible for schizophrenic patients to be more autonomous, it may also increase the necessity of frequent personal attention from their families or others due to side effects of medication and thereby remove the benefits that accrue from interpersonal contact, in addition to social stigma which cause adverse negative influence on quality of life for those patients.

Furthermore, in the present study there is a positive and statistically significant relation between total positive and negative symptoms and abnormal involuntary movements, this is an expected result because if positive and negative symptoms persist it would require more antipsychotic medication, this may lead to for along term to elicit of abnormal involuntary movements.

The individuals' quality of life in the present study was influenced by their psychopathology, by how long they had psychosis and resigned to antipsychotic medications and by their premorbid adjustment before the onset of psychotic symptoms. Our findings

supported contentions that medication alone may be necessary but not sufficient treatment, and that some minimum threshold of medical care and social services may be required in order to enhancing quality of life. In clinical terms, our findings provide evidence that symptoms control is not equivalent to quality of life and suggest that, additional treatment (medical and psychological) may have greater influences on quality of life than do antipsychotic medication.

**Conclusion:**

Based on the study findings, it can be concluded that:

- QOL among schizophrenic patients was better than non hospitalized schizophrenic patients. Also, the result of this study revealed that the patients with positive and negative symptoms have abnormal involuntary movement furthermore the patients with abnormal involuntary movement have lower quality of life
- Severity of symptoms and functional capacity remains the principal target of mental health services
- The individual's perception of his/her circumstances to be the central component of QOL
- Our findings support contentions that medication alone may be a necessary but not sufficient treatment, and that some minimum threshold of medical care and social services may be required in order to make a measurable difference in QOL. In clinical terms, our findings provide evidence that symptoms control is not equivalent to QOL, and suggest that additional treatment ( medical and psychological) may have greater influences on QOL than do antipsychotic medications
- Positive and negative symptoms are much more closely related to quality of life

**Recommendation:**

Results of this study call for the following recommendation:

- 1- Nursing profession must advocate of community care and improve of treatment and rehabilitation programs which have been mainly associated with improve the quality of life among hospitalized and non hospitalized schizophrenic patients
- 2- Developing, enhancing, and maintaining skills among hospitalized schizophrenic patients, especially self- care and domestic skills may enhance quality of life and facilitate their discharge into supported community setting
- 3- To enhance quality of life among outpatient schizophrenic group, community based intervention programs can be targeted at three broad areas psychological support, educational activity about patient's symptoms, and development of social support system for patients and their families
- 4- Nursing counsel in intervention to families of schizophrenic patient to improve their coping strategies.

**Table (1): Socio-demographic and disease characteristics of patients in the two study groups**

	GROUP				X2 test	p-value
	Inpatient (n=100)		Outpatient (n=100)			
	No.	%	No.	%		
<b>Gender:</b>						
<b>Male</b>	57	57.0	74	74.0		
<b>Female</b>	43	43.0	26	26.0	6.39	<0.01*
<b>Age (years):</b>						
<b>Range</b>	19.0-49.0		20.0-57.0			
<b>Mean ± SD</b>	33.9±8.3		37.5±8.1		T=3.07	<0.001*
<b>Education:</b>						
<b>Illiterate</b>	23	23.0	26	26.0		
<b>Basic</b>	36	36.0	25	25.0	2.88	0.41
<b>Intermediate</b>	32	32.0	38	38.0		
<b>High</b>	9	9.0	11	11.0		
<b>Marital status:</b>						
<b>Single</b>	64	64.0	74	74.0		
<b>Married</b>	23	23.0	21	21.0	4.37	0.11
<b>Divorced</b>	13	13.0	5	5.0		
<b>Job:</b>						
<b>Employee</b>	15	15.0	23	23.0		
<b>Skilled worker</b>	24	24.0	13	13.0		
<b>Housewife</b>	28	28.0	20	20.0	17.92	<0.001*
<b>Student</b>	7	7.0	0	0.0		
<b>Unemployed</b>	26	26.0	44	44.0		
<b>Significant others:</b>						
<b>None</b>	3	3.0	1	1.0		
<b>Parents</b>	47	47.0	49	49.0	1.04	0.79
<b>Siblings</b>	32	32.0	32	32.0		
<b>Others</b>	18	18.0	18	18.0		
<b>Duration of illness (years):</b>						
<b>Range</b>	1.0-15.0		1.0-20.0			
<b>Mean±SD</b>	5.3±3.1		4.5±3.2		T=0.24	0.81
<b>Number of previous hospitalizations:</b>						
<b>Range</b>	0.0-9.0		0.0-20.0			
<b>Mean±SD</b>	3.0±2.2		3.8±2.7		T=2.38	0.02*
<b>ECT:</b>						
<b>No</b>	79	79.0	78	78.0		
<b>Yes</b>	21	21.0	22	22.0	0.03	0.86

(\*) Statistically significant at  $p < 0.05$

**Table (2): Scores of positive and negative syndrome scale (PNSS), abnormal involuntary movements scale (AIMS), and quality of life scale (QOL) of patients in the two study groups**

	GROUP		t-test	p-value
	Inpatient (n=100)	Outpatient (n=100)		
	MEAN±SD	MEAN±SD		
<b>PNSS</b>				
<b>Positive symptoms</b>	15.9±7.6	27.7±9.7	9.63	<0.001*
<b>Negative symptoms</b>	16.2±9.9	24.8±10.3	6.02	<0.001*
<b>General psychic symptoms</b>	36±11.9	58.4±14.2	11.85	<0.001*
<b>Total PNSS</b>	68±26.7	110.9±27.6	11.24	<0.001*
<b>AIMS</b>				
<b>Abnormal movements</b>	14.9±5.2	17.7±6.7	3.27	<0.001*
<b>QOL</b>				
<b>General</b>	59.2±10.8	43.6±9.5	10.78	<0.001*
<b>Personal hygiene</b>	16.4±3.9	12.2±4.1	7.36	<0.001*
<b>Clothing/tenure</b>	21.3±4.1	18.0±5.2	5.06	<0.001*
<b>Eating/drinking</b>	27.7±2.4	26.2±2.3	4.47	<0.001*
<b>Elimination</b>	24.3±1.4	23.8±1.5	2.30	0.02*
<b>Mood</b>	63.8±8.5	47.9±10.9	11.42	<0.001*
<b>Social</b>	54.3±9.2	41.1±7.2	11.29	<0.001*
<b>External events</b>	12.1±5.5	6.2±1.4	10.61	<0.001*
<b>Total QOL</b>	279.0±40.1	219.1±30.5	11.88	<0.001*

(\*). Statistically significant at  $p < 0.05$

**Table (3): Pearson correlation matrix coefficients of components of positive and negative syndrome scale (PNSS)**

PNSS	PNSS	
	Positive symptoms	Negative symptoms
<b>Negative symptoms</b>	0.49**	
<b>General symptoms</b>	0.70**	0.73**

(\*\*). Statistically significant at  $p < 0.01$

**Table (4): Pearson correlation matrix coefficients of components of quality of life scale (QOL)**

	General	Hygiene	Cloth	Food	Elimination	Mood	Social
<b>Hygiene</b>	0.80**						
<b>Cloth</b>	0.78**	0.88**					
<b>Food</b>	0.64**	0.58**	0.58**				
<b>Elimination</b>	0.41**	0.52**	0.47**	0.41**			
<b>Mood</b>	0.69**	0.47**	0.41**	0.56**	0.17*		
<b>Social</b>	0.87**	0.82**	0.78**	0.63**	0.42**	0.68**	
<b>Events</b>	0.78**	0.72**	0.61**	0.52**	0.32**	0.62**	0.84**

(\*) Statistically significant at  $p < 0.05$

(\*\*) Statistically significant at  $p < 0.01$

**Table (5): Pearson correlation matrix coefficients of scores of PNSS, AIMS, and QOL**

	QOL	AIMS
<b>AIMS</b>	-0.28**	
<b>PNSS</b>	-0.84**	0.27**

(\*\*) Statistically significant at  $p < 0.01$

**Table (6): Best fitting stepwise backward regression model for scores of PNSS (dependent variable) and various socio-demographic and illness characteristics**

	Beta coefficient	Standard error	t-test	p-value
<b>Constant</b>	66.69	28.71	2.32	0.024*
<b>Group (reference: inpatient)</b>	33.47	7.26	4.61	<0.001*
<b>Marital status (reference: single)</b>	-14.78	8.12	1.82	0.074*
<b>Duration of illness (years)</b>	-2.40	1.20	2.00	<0.05*
<b>Significant other (reference: parents)</b>	20.23	8.07	2.51	0.015*

(\*) Statistically significant at  $p < 0.05$

$r$ -square=0.43

Model ANOVA:  $F=10.23$   $p < 0.001$

Excluded variables: age, sex, previous hospitalizations, ECT, number of children, education, job status

**Table (7): Best fitting stepwise backward regression model for scores of AIMS (dependent variable) and various socio-demographic and illness characteristics**

	Beta coefficient	Standard error	t-test	p-value
<b>Constant</b>	-1.46	4.07	0.36	0.721
<b>Group (reference: inpatient)</b>	2.86	1.31	2.18	0.034*
<b>Age (years)</b>	0.27	0.11	2.39	0.020*
<b>Number of children</b>	-0.96	0.38	2.56	0.013*
<b>Duration of illness (years)</b>	0.49	0.26	1.89	0.064
<b>Number of hospitalisations</b>	0.75	0.35	2.16	0.035*

(\*) Statistically significant at  $p < 0.05$

$r$ -square=0.43 Model ANOVA:  $F=8.33$   $p < 0.001$

Excluded variables: sex, ECT, education, job status, significant others

**Table (8): Best fitting stepwise backward regression model for scores of QOL (dependent variable) and various socio-demographic and illness characteristics and scores of AIMS and PNSS**

	<b>Beta coefficient</b>	<b>Standard error</b>	<b>t-test</b>	<b>p-value</b>
<b>Constant</b>	363.21	10.44	34.80	<0.001*
<b>Group (reference: inpatient)</b>	-23.18	6.72	3.45	<0.001*
<b>Number of children</b>	-6.15	1.74	3.53	<0.001*
<b>Number of hospitalisations</b>	2.88	1.29	2.23	0.030*
<b>PNSS (score)</b>	-0.83	0.10	8.23	<0.001*

(\*) Statistically significant at  $p < 0.05$

$r\text{-square} = 0.79$

Model ANOVA:  $F = 52.29$   $p < 0.001$

Excluded variables: age, sex, marital status, education, job status, significant others, duration of illness, ECT, AIMS

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## الملخص العربي

### جودة الحياة لدى مرضى الفصام في القسم الداخلي والخارجي

إن علاج مرض الفصام يحسن جودة الحياة لدى مرضى الفصام, إلا أن الأعراض الجانبية للعلاج الدوائي في الغالب لها تأثير سلبي على جودة الحياة فهي تحد من وظيفة المرضى, تعرقل القدرة على التفاعل الإجتماعي, والحركات اللاإرادية تزيد من وصمة العار. من أجل هذا تم إجراء هذه الدراسة لتقييم العوامل المؤثرة على جودة الحياة لدى مرضى الفصام, لقد أجريت هذه الدراسة على ٢٠٠ من مرضى الفصام تم اختيارهم مناصفة من القسم الداخلي والخارج في مستشفى بنها للصحة النفسية. لقد استخدمت أربعة من الوسائل لقياس البيانات الشخصية, جودة الحياة, الحركات اللاإرادية الغير طبيعية, والآخر لقياس الأعراض الإيجابية والسلبية لمرض الفصام. وقد أسفرت نتائج الدراسة عن أن متوسط مجموع درجات الأعراض الإيجابية والسلبية والحركات اللاإرادية كانت أعلى عند مرضى القسم الخارجي عنها في القسم الداخلي, بينما متوسط مجموع درجات جودة الحياة كان أعلى عند مرضى القسم الداخلي عنة في القسم الخارجي. على ضوء هذه النتائج نوصى بضرورة لتأكيد على جودة الحياة لدى مرضى الفصام عن طريق وضع مستوى مناسب لهذه الجودة وأن تزيد من المسؤوليات الواقعة على عاتق القائمين بالعناية بمرضى الفصام في المجتمع والمستشفيات.

## **MENOPAUSE: WOMEN'S HEALTH PROFILE AND HEALTH CARE NEEDS**

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### **ABSTRACT**

**OBJECTIVES:** To determine women's health profile, attitude as well as, their health care needs toward menopausal transition. **DESIGN:** A descriptive cross sectional study based on sample of convenience. **METHODOLOGY:** one hundred peri- or menopausal women, low risky, and over 35 years were interviewed to collect the data. The study was conducted in the gynecological out patient department of MCH center at Amr Ebin El-ass center from 1st April to July 2002. **RESULTS:** The age range of the women from 35- 52 years, the mean age of menarche was 12.9 + 1.3 years old. Thirty-six of women were illiterate vs. 22% had received university education, 54% were working and 46% housewives. Forty-three of women knew about menopause, 39% were aware of symptomatology, and 7% knew sequel of menopause while only 4% knew about treatment of menopause. Fifty-three of women were satisfied with cessation of menstruation and only 17% desired to continue menstruation as well as, 24% were unhappy with menopausal status. Fifty-seven of women felt a need for health education of menopause from health centers and mass media (57% vs. 39% respectively) 20% needed medical examination and 9% medical consultation .**CONCLUSION :** Women have different views about menopause, few see it as a medical condition requiring treatment while, others consider it as a natural transition. There was lack of knowledge regarding significance of menopause.

### **Introduction and review of literature:**

Menopause refers to the last menstrual bleeding and is generally considered to have occurred retrospectively after one year of amenorrhea Samad, Qureshi (2002) It may occur naturally, be surgically induced or occur secondary to other medical disorders. Single plasma FSH level >15 IU/L would be diagnostic of menopausal state (Takamatsu, Ohta, Makita and Horiguchi (2001). The climacteric or perimenopause is 2-3 years transitional phase during which reproductive function ceases.

The average age at menopause in the developed nations is 51 years while the mean life expectancy of women has lengthened to approximately 82 years. Thus the average woman in the developed world can now expect to spend approximately one-third of her life in a postmenopausal state assuming normal age at menopause. In Egypt, according to 2003, the

mean life expectancy of women by the year 2020 to 2050 to be lengthen to approximately 74.5-80.1 years that may cause a three fold rise in the postmenopausal population .

Low estrogen levels are linked to some uncomfortable symptoms in many women. A common symptom is hot flushes, resulting in disruption of sleep, and mood changes. Other symptoms may include urinary incontinence and dysperunia (Elias and, Sherris, 2003). In the long term, women may develop osteoporosis and increased risk for heart disease. For some women these changes may be experienced as little more than inconveniences. For others, they may involve significant physical and emotional challenges (Dusitsin, 1998).

Attitudes towards menopause and the physical experiences are shaped by cultural and social factors. Eating foods high in soy and other plant estrogen may reduce the symptoms, but culture, biology and environment interact in complex ways to influence the experience of menopause (Payer, 1999).

Climacteric symptoms negatively affect the quality of life of middle-aged and elderly women and the treatment of such symptoms is important because they develop in about 50 to 80% of women aged 40-60 years. Women's health and well being during menopausal period of proper care and needs is uncertain.

### **Aim of the study:**

The aim of this study is to identify maternal profile of menopausal women as well as their attitude and health care needs toward menopausal transition.

### **Research questions:**

- 1- What are the profiles of menopausal women's?
- 2- What are the attitude and health care needs of menopausal women's?

### **Material and methods:**

**Design:** A descriptive cross sectional study was conducted in this study.

**Setting:** The study was conducted in the out patient department of MCH center at Amr Ebin El ass from 1<sup>st</sup> April to July 2003.

**Sample:** A total of 100 peri-menopausal or menopausal women seeking gynecological treatment, low risky, over 35 years were selected on convenience basis.

### **Data collection tool:**

A structured interview through the questionnaire was used to collect data related to socio-demographic characteristic of the women, menstrual history such as age at menarche age at menopause, regularity and duration of menstrual cycle. Also, women were asked if they had ever heard of or knew about menopausal symptoms. An open ended question was also asked about their source of information and knowledge of availability of treatment for

menopausal symptoms was also elicited as well as, women opinion regarding the need for health care and or health education on menopause were also assessed

### Results:

The age range of the women between 35-52 and their mean age of menarche was  $12.9 \pm 1.5$  while the mean age of menopause among women was 48.4. Thirty six percent of women were illiterate compared to 37 % of them had received secondary and or university education. Fifty four percent of them were working Vs. 46 were house wife (Table 1).

**Table (1) Socio-demographic characteristic of menopausal women**

Characteristics	N	%
<b>Age :</b>		
35-39	5	5
40-44	40	40
45-49	37	37
50-<54	18	18
<b>Education:</b>		
Illiterate	36	36
Read and write	15	15
Primary &or preparatory	12	12
Secondary or higher education	37	37
<b>Occupation :</b>		
Working	54	54
House wife	46	46
<b>Total</b>	<b>100</b>	<b>100</b>

**Table (2)** showed that the mean age at menarche was  $12.9 \pm 1.3$  years while the mean age of menopause among women was  $48.4 \pm 5$ . Seventy two percent of women have irregular menstrual cycle Vs.28% of them has regular period while 49 % of them mentioned that quantity of flow was changed compared to 25% who mentioned that the quantity not changed respectively.

**Table (2) Menstrual profile among women**

profile	N	%
Mean age of menarche	12.9 $\pm$ 1.3	
Mean age of menopause	48.4 $\pm$ 5 .	
Regularity of period		
Yes	72	72
No	28	28
<b>Amount of flow :</b>		
Changed	49	49
Not changed	25	25
moderately changed	26	26

Twenty-eight (28%) women presented with complains related to irregularity of menstrual cycle, 23 % due to uterovaginal prolapse, (22 %) of women had vaginal discharge , and 12 % complaining from postmenopausal symptoms and only 5% were complaining from postmenopausal bleeding (Table 3).

**Table (3) Presented complains among women's:**

Presented complains	N	%
Uterovaginal prolapse	23	23
Post menopausal symptoms Menstrual irregularity	12	12
Vaginal discharge	28	28
Lower abdominal pain	23	23
post menopausal bleeding	9	9
	5	5
<b>Total</b>	<b>100</b>	<b>100</b>

Forty three percent of women had heard and knew about menopause and 39 % of them were aware of symptomatology while only 7% knew about the sequels of menopause compared to 4% of them aware of menopausal treatment (table 4)

**Table (4) Women's knowledge of Menopause**

Knowledge in	N	%
Menopause	43	43
Symptoms	39	39
Sequels	7	7
Treatment	4	4
<b>Total</b>	<b>100</b>	<b>100</b>

Fifty three of women were satisfied with cessation of menstruation and only 17% desired to continue their menstrual cycle, 24 % of women were unhappy with their menopausal status. In addition, 49% of women felt need for health education about menopause compared to 20% of them needed examination, 12% did not know compared to 9% who mentioned a need for medical consultation respectively (table 5)

**Table (5) Types of health care needed by women's**

Types of health care needs	N	%
Medical consultation	9	9
Desire for health education	59	59
Needed examination	20	20
Don't know	12	12
<b>Total</b>	<b>100</b>	<b>100</b>

Regarding source of health education needed by womens,57% of them need to take health education from health centers,39% from mass media, ( TV & radio) and only 4% of women's mentioned that health education should be provide by nurses respectively .  
(Table 6)

**Table (6) Source of health education needed as mentioned by women's**

Source from	N	%
Health centers	57	57
Mass media	39	39
Nursing staff	4	4
<b>Total</b>	<b>100</b>	<b>100</b>

**Discussion:**

The onset of menopause not only signals the end of a woman's reproductive function but also the start of new phase in which she has the freedom to appreciate the quality of her life. It was once assumed that the menopause was not only a universal event but that its timing and physiological implications were universally the same. However, the accumulation of global information concerning the status of women during the menopause from different parts of world has raised questions whether women experience menopause at the same age, with the same symptoms and same mortality, irrespective of where they live.

In the present study it was found that majority of women were multiparous, Majority of women had heard about menopause from their elders but few were aware of symptoms and complications of menopause. It emerged quite clearly that a lot of women were experiencing problems associated with the menopause and also related to their general life situation. Majority expressed feelings of depression and anxiety. The women generally had a very poor understanding of what was happening to their bodies during menopause. Their experience of seeking help for problems associated with the menopause was varied, but for majority, their needs were unmet and they were coping with mental and physical symptoms with little or no support. The women considered cessation of menstruation a positive aspect of menopause because of their religious beliefs. Knowledge and understanding of any method of treatment including Hormone Replacement Therapy (HRT) was virtually non-existent amongst all except professional women. <sup>7</sup>

Health care providers in developing countries often have limited information regarding physical, psychological and social problems of aging. These women do not understand their unique health risks. Moreover, their financial and physical limitations further reduce their access to services.<sup>7</sup>

In the international health report it was concluded that the menopause seems to be associated with fewer and less severe symptoms in Asia than in the West.<sup>8</sup> the prevalence of hot flushes associated with menopause varies widely between different cultures and countries. In general, flushes and sweats are more common in European and North American women than in other populations. A high intake of dietary phyto-estrogens may play an important role in reducing the consequences of estrogen deficiency. This has been suggested as a possible explanation not only of the lower frequency of menopausal symptoms, but also of the lower rates of breast cancer and hip fracture in Japanese compared with Caucasian women.<sup>9</sup> It has been reported that a later age at menarche favored an earlier menopause.<sup>10</sup> Exercise seems to protect against depression and reduce the frequency of vasomotor symptoms.<sup>11</sup>

In the year 2000, Bradford District Health Promotion Service (BDHPS) carried out a small research study with the aim of "investigating the experience, knowledge and attitudes towards menopause and HRT of Bradford Asian women of Pakistani origin". Thirty-four Bradford Asian women of Pakistani origin took part in focus groups in which they discussed their experiences of the menopause. The women identified some positive aspects to the menopause, in particular, the freedom from religious restrictions associated with menstruation. There was general agreement that attitudes were changing and that their daughters were much more able to discuss problems associated with menstruation with them than they had been able to do with their mothers.<sup>12</sup>

Indeed, one of the first major studies to look at the attitudes of women towards menopause, called the Study of Women's Health Across the Nation (SWAN), found, , that African-American women tended to view menopause more positively than Caucasian or Asian women.<sup>13</sup>

Menopause marks a time of dramatic hormonal and often social change for women. Our challenge is to ensure that the quality of their lives is such as to protect their dignity as well as meet their physical, psychological and sexual needs.<sup>14</sup> Depending on resources, counseling about menopause, its symptoms and healthy life style may assist in adaptations. Education is the only way to dispel myths and misperceptions and results of this study confirm that an unmet need for health education and treatment for menopause exist in Pakistan. Health care providers need training to help treat the health problems, reduce the risks of long-term disease and improve the quality of life of the aging women.<sup>15,16</sup> Indeed, there is a need to conduct population- based studies on the knowledge and awareness of women towards menopause, so as to formulate a countrywide health education strategy.

### **Conclusion:**

Women have different views about menopause; few see it as a medical condition requiring treatment, whereas a majority considers it a natural transition. There was dearth of knowledge regarding significance of menopause.

### **Recommendations:**

From the results revealed by this study, the following are recommended.

- 1- Women should have accurate information regarding physical and psychological change during menopause period.
- 2- Further researches are needed on the knowledge and awareness of women towards menopause.
- 3- Handouts and audiovisual aids are recommended to be given to the women about the physical and psychological change during menopause.

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### الملخص العربي

#### سن اليأس والرعاية الصحية اللازمة له

يهدف هذا البحث تحديد العناية الصحية اللازمة للسيدات خلال الفترة الانتقالية لسن اليأس . وهذه دراسة وصفية شملت 100 سيده حضرت لمركز رعاية أمومة وطفولة بعمر بن العاصي بعيادة النساء والتوليد ، وكانت فترة البحث من يناير وحتى يوليو 2003م ، ومتوسط عمر السيدات اللاتي شاركن في البحث يتراوح بين 35 – 42 سنة ، و22% منهن متعلمات جامعيًا بنسبة 33.6 % منهن لا يقرآن ولا يكتبن (أميات).

ووجد أن 43 % من السيدات ليهن معلومات عن سن اليأس ، و 39 % على دراية بالعلامات المصاحبة لسن اليأس ، بالإضافة إلى أن أقل من ربع العينة كن سعداء بهذه الفترة ( فترة انقطاع الطمث ) بينما وجد أن 17 % كن يرددن استمرار الدورة الشهرية وان 20 % من السيدات يحتجن فحص طبي . كما يختلف السيدات في وجه نظرهن تجاه فترة انقطاع الطمث ( سن اليأس ) فمنهن من قال أنها فترة طبيعية والغالبية قالوا أنها تحتاج إلى استشاره طبية وهذا لنقص المعلومات لديهن التي تخص هذه المرحلة العمرية للسيدات.

## LEADER EMPOWERING BEHAVIOR AND ITS IMPACT ON STAFF NURSES' JOB EMPOWERMENT

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### **Abstract**

Nurse leaders should be aware of what staff nurses' expectations from them. Staff nurses want their leaders to be honest, competent, forward looking and inspiring support as well as empowering them. The aim of the study was to explore leader empowering behavior and its impact on staff nurses' job-empowerment. The study was conducted in the cardiac, medical and surgical intensive care units at Zagazig University Hospital. The results revealed that nurse leaders empowering behavior significantly influenced nurses' perception of job formal and informal power and access to empowerment structure (opportunity, information, support, and resources). It is recommended that nurse leaders improve their behavior to be more empowering through educational sessions on problem-solving, decentralized decision-making, and effective communication.

### **Introduction**

Nurse leaders should be aware of what staff nurses' expectations from them i.e. to have the efficacy or the ability to get things done in the health organization settings. Staff nurses want their leaders to be honest, competent, forward-looking and inspiring, to support and empower them (Hein and Nicholson, 1994).

Head nurse is one of the nurse leaders in the hospital who is responsible for organizing one nursing unit where nursing care is directly or indirectly provided. She needs to develop skills and attitudes that facilitate staff nurses and hospitals' transitions necessary for success in redesigning empowering work settings. The more empowering head nurses as leaders are the greater commitment of the nurses to the hospital, - besides- more job satisfaction, as well as less role ambiguity and role overload (Ann, 1997).

The head nurses as empowering leaders might include expressing confidence in staff nurses' accompanied by high performance, fostering opportunities for staff nurses to participate in decision making, providing autonomy from bureaucratic constraints, setting inspiration of meaningful goals, and facilitating goal accomplishment. A nurse leader with empowering behavior should also encourage follower to be equal partner. It means she should be facilitator of cooperation, caring listener, communicator, model of genuine openness and honesty, and an assertive appreciator of uniqueness (Conger and Kanungo, 1988).

Head nurses as empowering leaders affect their followers in two ways. They can inspire them directly, or facilitate their performance in a way that motivates them to do more. The empowered nurses, then, should have greater ability to tolerate stress, apply existing knowledge more quickly, and engage in more fault prevention over time. This enables nurses to work smarter, not harder. In sum, nurse leaders who truly empower

those who report to them are offering much more than motivation. They are giving their staff nurses' opportunities to learn and to protect themselves from the ravages of stress (Wall and Jackson, 1995).

Head nurses should share information with their staff and encouraging collaborative problem solving. The nurse leaders can create a sense of empowerment by conveying to staff meaningful objectives of their work as well as the challenges in providing quality patient care. This creates confidence for staff, and also reinforces the desire to continue to develop the staff member's needs for autonomy and authority to make decisions about tasks and resources. (Winkinson, 1998).

Recently, it is proved by Tebbitt (1993) and Geroy et al (1998) that, there is a link between leader empowering behavior and job empowerment that means the behaviors of head nurses as nurse leaders have an impact in enhancing feelings of self-efficacy among nurses through the identification of conditions that foster power. Job empowerment means giving every one instead of just a nurse with certain position or certain job title, the legitimate right to make judgments, form conclusions, reaches decisions, and then act. Empowerment is therefore is the notion of devolving decision-making authority and responsibility to frontline for control and enhancement of service quality and customer satisfaction during service delivery ( Ellefsen and Hamilton, 2000).

Empowerment, as a motivational process, increases staff nurses self-efficacy, enabling him/her to complete work more effectively. Increase job satisfaction and quality of patient care can increase outcome of performance, customer satisfaction, organizational commitment, satisfaction with supervisor, and satisfaction with work. It is more likely to delegate and willing to exert individual need for the good of the hospitals (Morrison et al, 1997).

Empowerment may be influenced by several factors e.g. organizational beliefs about authority and status, control perceptions needs, and attitude, organizational inertia, personal and inter-departmental barriers, nurses number, mix and skills, a lack of ability and unwillingness of staff to assume responsibility for their attitude and behaviors, and managerial competence (Marquis and Huston, 1996). Empowering work environments are those in which employees' access to information, support and resources necessary to accomplish work available, as well as those that provide opportunities for growth and development of knowledge and skills (Kanter, 1993).

There are certain models that encourage empowerment by their very arrangements. Decentralized nursing models do this because of a commitment to send authority and responsibility as far down the chain of command as possible. Restructured practice model uses a matrix structure to provide for shared and distributed authority and power. When power is shared in any organizational design, empowerment is fostered .The newer shared governance models of empowerment make an even greater commitment to empowerment ,not only providing for professional autonomy but demanding it (Barnum and Kerfoot, 1995).While ,there is another model for empowerment in Iran where nurses replace their subservient behavior and routine based nursing care with evidence based practice to support their nursing care actions ,so having nurses to function at this level is necessary for the process of empowerment (Hajbaghery and Salsali, 2005).

In Kanter's model, individuals with high levels of formal and informal power have access to structures of productive power within an organization. These structures include lines of information, lines of support, line of opportunity, and lines of resources/supply.

The lines of information involve formal information that is necessary to carry out a job, as well as informal information that concerns the current state of affairs within an organization. Lines of support include positive feedback from superiors and important others, as well as support for job autonomy (Laschinger, 1996, Spreitzer and Doneson, 2005). Lines of resources address the ability to obtain the materials, money and rewards necessary for achieving job demands. Access to opportunity for professional growth and movement in the organization completes the necessary tools for success at work. Kanter claims that working in these conditions has a positive impact on nurses, which increased feelings of self-efficacy and job satisfaction, higher motivation, and less burnout. These empowering conditions create more productive work environments, since nurses are highly effective and more satisfied with their jobs, they become more committed to hospital goals, more likely to try out innovative approaches to work and less likely to be stressed at work or to change jobs (Kluska et al., 2004).

The access to these empowering structures is influenced by the degree of formal and informal power nurses have in the hospital. Formal power evolves from having a job that affords flexibility, visibility, provider reorganization, and is relevant to key organizational processes. Also, it refers to the authority to get things done. Generally, the amount of formal power that individuals have is associated with their position in the organization hierarchy. Informal power is derived from the development of alliances or relationships departments across departmental boundaries and with people external to the organization. These include relationships with influential others, peers, and subordinates. Nurses with formal and informal power are in a position to gain access to work structures that enable or empower them to accomplish their work (Laschinger et al, 2000).

Therefore, empowerment of staff is a critical factor in an organization's achievement of its mission, vision, and strategic direction, particularly in the face of organizational changes (Klidas, 2002). One of the primary objectives of the leader is to develop skills and attitudes that facilitate individual and organizational transition necessary for successful redesigning of an empowering work setting (Triolo et al, 1995).

Studies done in Egypt have investigated nurses' perception of job empowerment and organizational commitment in critical care units in Alexandria (Abd El Aal, 1999), and the relationship between staff nurses' perception of job empowerment and their job satisfaction in Mansoura (El-Sayed and Saber, 2002). However, no attempt was done to investigate leader empowering behavior and its impact on staff nurses' perception of job empowerment. Leader empowering behavior would probably have an influence on staff nurses' perception of workplace empowerment, either positively or negatively. Hence, there is a need to explore the relationship between leader empowering behaviors and staff nurses' perception of workplace empowerment.

### **Aim of the Study**

The aim of the study was to explore leader empowering behavior and its impact on staff nurses' job empowerment

### **Subjects and Methods**

#### **Setting:**

The study was conducted in the cardiac, medical and surgical intensive care units at Zagazig university hospitals, with 57 beds and staffed 165 nurses. The capacity of

cardiac intensive care unit is 12beds, medical intensive care unit 25 beds and surgical intensive care unit 20 beds.

**Subjects:**

All staff nurses 8 professional nurses (B.Sc. degree) and 157 technical nurses (Diploma degree) employed at the foregoing units at Zagazig University Hospital were eligible for inclusion in the study. The chosen staff nurses were fulfilling the criteria of having a minimum one-year experience in the unit as staff nurse, to be oriented for working conditions, and be able to express opinion about leader empowering behavior and job empowerment. Their total numbers was 165 staff nurses (53 nurses in cardiac intensive care unit, 55 nurses in surgical intensive care unit and 57 nurses in medical intensive care unit).

**Tools:**

Three tools were used for data collection, namely a self-administered questionnaire, the Leader Empowering Behavior Scale (LEB), and the Job Empowerment Scale (JES).

The self-administered questionnaire was intended to collect data about the demographic and job characteristics of staff nurses. These included age, nursing qualification, and years of experience.

The Leader Empowering Behavior Scale (LEB) was developed by Conger and Kanungo (1988) to measure staff nurses' perception of empowering behavior of their head nurses as leaders for the unit. It includes 12 items grouped as enhancing the meaningfulness of work (1 item), fostering participation in decision-making (3 items), facilitating goal accomplishment (4 items), expressing confidence in high performance (3 items), and providing autonomy from bureaucratic constraints (1 item). Responses were measured on a five-point Likert scale that ranges from very often (5 points) to never (1 point).

The Job Empowerment Scale was adapted from Laschinger et al (2000) and consists of 3 parts. The first part involves the conditions of work effectiveness questionnaire (CWEQ) used to measures staff nurses' perception of workplace empowerment. It includes 12 statements: 3 statements for opportunity to learn and grow 3 statements for access to information, 3 statements for receiving support, and 3 statements for access to resources necessary to do the job. The Second part, the Job Activities Scale (JAS), was used to measures nurses' perception of formal power in their current work setting. It includes 3 statements. The third part is the Organizational Relationship Scale (ORS) used to measure nurses' perceptions of the informal power in their current work setting. It includes 4 statements. Responses were measured on a five-point Likert scale that ranged from a lot (5 points) to none (1 point).

Scoring system for empowerment according to El-shaer (2002)

<50% low empowerment

50%-74% moderate empowerment

75% high empowerment

**Methods:**

Tools were translated into Arabic and tested for content validity. Official agreement was obtained to collect the data from staff nurses included in the study. A pilot study was conducted on ten staff nurses working at Zagazig University Hospitals to identify ambiguous question, and accordingly some changes were made. These subjects were not included in the main study. Data were collected through completing the tools by the staff nurses. This took a period of 3 months starting from July 2004.

**Statistical analysis:**

Data entry was done using Epi-Info 6.04 computer software package, while statistical analysis was done using SPSS 11.0 statistical software package. Quantitative continuous data were compared using Student t-test in case of comparisons between two groups, while qualitative variables were compared using chi-square test or Fisher exact test, as suitable. To assess the validity of the leadership behavior scale, factor analysis was done using the principal component analysis (PCA) extraction method, with quartimax rotation and Kaiser normalization. An Eigen value of 1.0 and a minimal loading value of 0.4 were set. To assess the relationship between scores of empowerment and conditions of work effectiveness as dependent factors, on the one hand, and various quantitative factors, as independent factors, on the other hand, multiple stepwise backward regression analysis was used, and analysis of variance for the full regression models were done. Statistical significance was considered at p-value <0.05.

**Results**

The content validity of the leader empowering behavior scale have been tested after translation into Arabic, factor analysis was done. According to this analysis, the twelve items of the scale were distributed on five components, which explained 77.307% of the variance.

The study sample consisted of 165 staff nurses. Their personal characteristics are presented in table (1). They were mostly below 30 years of age, with a mean  $28.3 \pm 9.2$  SD years. The majority was nursing school diploma nurses (95.2%). The highest percentage had experience of ten years or more (40.0%).

Table (2) illustrates the mean scores and standard deviation for staff nurses' perception of nurse leader empowering behavior scores in the study sample. As the table indicate, expressing confidence in high performance had the highest mean score (68.5), whereas facilitating goal accomplishment had the lowest mean score (29.3). Overall, the mean score was 52.0.

Concerning nurses' perception of components of job empowerment, table 3 presents the mean scores of conditions of work effectiveness, as well as formal and informal power. Among the four-empowerment components, opportunity to grow had the highest mean score, while access to information had the lowest score,  $73.8 \pm 17.9$  and  $39.4 \pm 17.9$ , respectively. Informal power had a higher mean score ( $77.9 \pm 14.2$ ), compared to formal power ( $55.7 \pm 8.5$ ).

Correlation between leader empowering behavior and job empowerment with demographic characteristics is represented in table (4). The difference between age, nursing education and leader empowering behavior was statistically significant (P-value = 0.017 and < 0.001). On the other hand, the difference was not statistically significant

between age and job empowerment (P- value = 0.25), years of experience and both leader empowering behavior and job empowerment and between nursing education and job empowerment.

**Figure 1** illustrates the relationship between the scores of leader empowering behavior and staff nurses' job empowerment. There are a positive statistically significance correlation between leader empowering behavior and the staff nurses' job empowerment.

**Table (1):** Demographic characteristics of staff nurses working in the study settings (n=165).

Items	No.	Percent
Units		
Cardiac ICU.	53	32.1
Surgical ICU.	55	33.3
Medical ICU.	57	34.6
Age (years):		
< 30	108	65.5
30-	30	18.2
40+	27	16.3
Mean $\pm$ SD	28.3 $\pm$ 9.2	
Nursing qualification:		
B.Sc. degree	8	4.8
Diploma degree	157	95.2
Experience (years):		
< 5	53	32.1
5 -	46	27.9
10 +	66	40.0
Mean $\pm$ SD	10.9 $\pm$ 8.9	

**Table (2):** Mean scores and standard deviation for staff nurses' perception of nurse leader empowering behavior (n=165).

Component	Mean $\pm$ SD
-Fostering participation in decision-making	58.1 $\pm$ 19.5
-Facilitating goal accomplishment	29.3 $\pm$ 13.2
-Expressing confidence in high performance	68.5 $\pm$ 19.5
-Providing autonomy from bureaucratic constraints	35.9 $\pm$ 18.1
-Enhancing the meaningfulness of work	51.6 $\pm$ 15.2
Total mean	52.0 $\pm$ 10.5

(\*) Statistically significant

**Table (3): Mean scores and standard deviation for staff nurses' perception of components of job empowerment (n=165).**

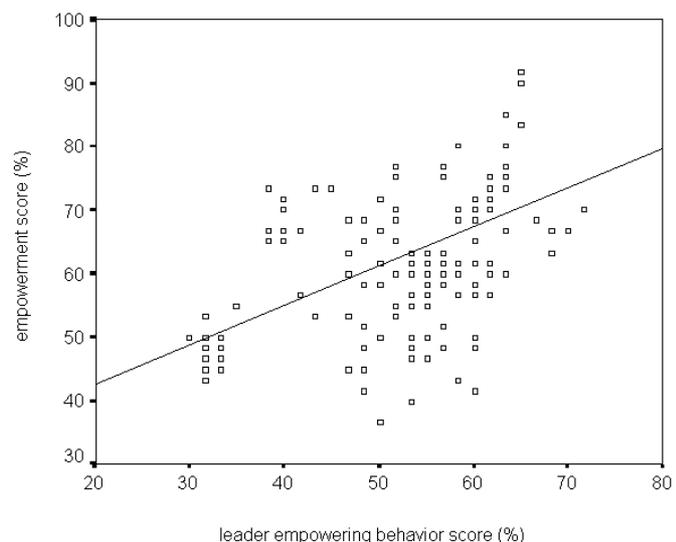
Empowerment component	Mean ±SD
a- Conditions of work effectiveness:	
-Opportunity to grow	73.8±17.9
-Access to information	39.4±17.9
-Receiving support	66.1±26.4
-Access to resources	70.0±14.3
Total mean	62.3±11.9
b- Immediate manager's power:	
-Job activities scale (formal power)	55.7±8.5
-Organizational relationship scale (informal power)	77.9±14.2

(\*) Statistically significant at  $P < 0.05$

**Table (4): Correlation between leader empowering behavior score and job empowerment with demographic characteristics.**

Demographic characteristics	Leader empowering behavior		Job empowerment	
	r	P-value	r	P-value
Age	0.19	0.017*	0.09	0.25
Years of experience	0.14	0.073	0.11	0.14
Educational qualification	0.34	<0.001*	0.08	0.34

(\*) Statistically significant at  $P < 0.05$

**Figure (1): Scatter plot for the relation between scores of leader empowering behavior and staff nurses' job empowerment**

$$r = 0.543, P < 0.001$$

$$y = 30.554 + 0.612x$$

## Discussion

In today's health care environment, a head nurse as nurse leaders fosters job empowerment. Creating such spirit does not occur in isolation, it requires nurse leaders with special characteristics in hospital environment. All health care settings need nurse leaders who possess empowering behaviors to empower their staff nurses to assume new roles in different practice areas. In fact, nurse leaders struggle to empower nurses to

deliver the same level and quality of services with fewer resources (McKinnon, 1999).

This study examined nurse leaders' empowering behavior and its impact on job empowerment. The results revealed that nurse leaders empowering behavior significantly influenced nurses' perception of job formal and informal power and access to empowerment structure (opportunity, information, support, and resources). The staff nurses at Zagazig University Hospitals mentioned that their leaders in the nursing units have empowering behavior in form of fostering participation in decision making, facilitating goal accomplishment, as well as experience confidence in high performance. As in honest and open discussions and relationships between staff nurses and their nursing leaders to help to accomplish their nursing care in quality. Besides, positive feedback and constructive guidance during work that maximize nurses' self-esteem. Such empowering behaviors are the reasons for job empowerment with Formal, and informal power which attribute the nurses to perform their jobs with effectiveness and efficiency, and encouraging them in active involvement in better quality of patient care.

A similar positive association between nurse leader empowering behavior and job empowerment was determined by Laschinger et al (1999) who admitted that nurse leaders need to develop empowering behavior skills and attitudes that facilitate the nurses and hospitals transitions necessary for success in redesigning powering work settings. Moreover, Morrison et al (1997) have emphasized that designing interventions that allow relative influence of nurse leadership style have a great effect on nursing staff empowering attitudes and behaviors. Dick (2004) and Kanter (1993), added that where nurses have access to formal and informal power sources is related to access to work empowerment structure.

The staff nurses at Zagazig University Hospital perceived certain factors in the behavior of nurse leaders were more empowering than others. For instance, confidence in the staff nurses' ability for high performance was perceived as the highest behavior. This might be due to that nurse leaders share information with the staff, have close supervision most of the time, as well as encourage collaboration in problem solving. Such finding is consistent with Hui (1994) who has clarified that confidence in staff nurses work and performance is based on fostering participation and sharing information and different points of views regarding all aspects in the nursing unit.

On the other hand, staff nurses in the present study considered their leaders less empowering in facilitating goal accomplishment. Many nurse leaders do not know the goals of the nursing service department, and sometimes it is not clear to them. A nurse with no goals has no reason to exist, no motivation to function, and no drive to succeed. Nurse leaders have to state goals to design the system that will be primarily responsible for goal attainment, and to understand how the group should be working as a single, integrated unit for effective goal accomplishment (Dastmalchian and Javidan, 1998).

In the present study, staff nurses perceived the condition of work effectiveness factors as moderately empowering. This is because nurses at Zagazig University Hospital have moderate opportunity to grow, moderate receiving support and have moderate access to resources

Nonetheless, their access to information is limited. This is because of lack of proper nursing information system to provide the nurses with information about plans, events, and activities that affect their job and help them to accomplish their work. Overall, the foregoing should help them to be empowered in their work in these hospitals. This finding is similar to what El- Sayed and Saber (2002) proved that nurses at Mansoura University Hospital, perceived the importance of the presence of nursing information

system to provide the nurses with necessary knowledge for their nursing care, had positive contribution to work effectiveness to empower nurses.

Meanwhile, according to nurses at Zagazig University Hospital, informal power was perceived by staff nurses as a more empowering factor than the formal power. Many factors might provide some explanation for this finding. Among others are presence of good informal channels of communication among nurses, as well as the some informal group activities inside and outside the hospital. In this respect, Kanter (2000) has signaled that personnel who have access to informal power characteristics in the work environment may become active to participate in decisions related to their work, are independent, and are encouraged in unit activities without fear.

Concerning the factors affecting perception of empowerment, Mc Dermott et al., (1996) found that as age increases staff nurses perceives more power, opportunities, recognition, and have access to challenging work, which give them better empowering behavior as well as job empowerment. In this study, there was a positive correlation between nurses' perception of leader empowering behavior and their age, while this correlation was not found among nurses at Zagazig university hospital, they do not have job empowerment as they grow olds.

These results were opposed with the result of Abd El Aal (1999) who has mentioned that nurses at Alexandria Main University Hospital are empowered as they grow older. This due to increase in age, becoming more knowledgeable and adept in accessing the sources of power, resources, information, support and opportunity.

Again, as years of nursing experience increases, nurses become more familiar with their work which have a positive impact on job empowerment (Chandler, 1994). But the present findings showed no statistical significant difference between nurses' perception of leader empowering behavior and job empowerment and their years of experience. Such results is due to nurses are reluctant to apply their experience over the years to change and empower their staff .So, nurses do less effort to gain more information about nursing care and procedures

In Abd El-Satter (2002), he found that there is a positive statistical significant correlation between educational qualification and nurses' job empowerment; he revealed that nurses who had a bachelor degree are more empowered than nurses with diploma degree. But, unfortunately this is not true in this study .The nurses with diploma degree at Zagazig University Hospital had job empowerment more than those with bachelor degree. This result is due to nurses do not know the value and goal of management role, beside they do not have a job description to act as a guideline for there activities. While this correlation was positive with nurses' perception of leader empowering behavior. This may be due to that the bachelor degree nurses are professional with abilities, skills and attitudes that facilitate them to recognize the importance of leader empowering behaviors in empowering them in work setting than nurses with diploma degree.

So, in nursing there is great need for nurse leaders to have empowering behavior to empower their staff nurses working in the hospitals for better quality of patient care.

### **Conclusion and Recommendations**

In conclusion, the study findings pointed to a moderately empowering leader behavior in the study settings, as perceived by staff nurses. The most important

empowering behavior of the nurse leader was the confidence in their ability of high performance, while facilitating goal accomplishment had the least important empowering behavior. Among the four empowerment components, opportunity to grow had the highest mean score, while access to information had the lowest score. Informal power was more important than formal one. So, job empowerment was significantly predicted by empowering leader behavior.

In the light of the foregoing, the following recommendations are suggested:

- Nurse leaders should be aware and improve their behaviors in a way to empower their staff. This might be done through formal and informal educational sessions on problem-solving, decentralized decision-making, and effective communication. This would empower staff nurses to improve their work environment.
- Moreover, nurse leaders need to have to assess the structures in their organizations to identify barriers that hinder staff nurses' access to information, especially those relating to hospital policies, rules, regulations, and unit plans.

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إن دور القائد هو دور ديناميكي متغير ، وقادة التمريض ينبغي أن يكون لديهم وعى بما تتوقع الممرضات منهم. والممرضات يرون أن يكون قاداتهم متصفين بالأمانة والكفاءة وبعد النظر ، بالإضافة إلى إظهار التعضيد والمساندة وبعث القوة بينهم.

تهدف هذه الدراسة إلى استكشاف رؤى الممرضات لسلوك القائد الباعث على القوة وتأثيره على إدراك الممرضات لقوتهم المهنية.

تكونت العينة من جميع الممرضات اللاتي تعملن في مكان البحث وكان عددهم 165 ممرضة ( 53 ممرضة يعملن في عناية القلب – 55 ممرضة يعملن في عناية الجراحة – 57 ممرضة يعملن في عناية الباطنة) وتم اختيارهن بناء على معايير ألا تقل عدد سنوات الخبرة لديهن عن سنة

## PHYSICAL AND PSYCHOLOGICAL EFFECTS OF APPLICATION OF SELF-CARE STRATEGIES FOR SECOND DEGREE BURNED PATIENTS

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### ***Abstract***

A major burn is accompanied by an overwhelming insult to the patient, both physically and psychologically. Burn patients require specialized care, and need to be involved in developing a daily plan of care. This study aimed to design and implement self-care strategies for burn patients based on needs assessment, and to evaluate the effect of its application on burn patients' physical and psychological aspects.

This quasi-experimental pre-post and follow up assessment study was done at the burn unit at El-Demerdash Hospital. The sample included 60 patients with second degree burn injury, able to engage and perform the self-care activities, selected through systematic random sampling from the patients admitted from October 2003 to April 2004. Three different tools were used for data collection, a patient needs assessment sheet, a knowledge assessment form, and an observation checklist to assess patient's performance of self-care activities. The content, sessions, teaching methods and media were prepared, and a booklet was designed to include the self-care strategies, and used to teach patients.

Totally, 15.0% of the patients had physical needs, 20.0% had depression and 6.7% had anxiety. The highest need was for non-medical support (36.7%). Patients' knowledge and performance related to burns has shown statistically significant improvements in almost all its aspects throughout the intervention phases,  $p < 0.001$ . The ability to look and touch burned area has shown statistically significant improvement from the pre to the post and follow-up phases. Multivariate analysis revealed that the intervention and the level of education were the only statistically significant independent predictors of the knowledge score. The score of performance was statistically significantly and independently predicted by the intervention, the score of knowledge, and the score of needs. CONCLUSION: Based on the study findings, it is concluded that burn patients have social and psychological needs more than physical needs. A self-care program provided by community health nurse and surgical nurse based on assessment of these needs was successful in improving burn patients' knowledge and practice related to this type of injury.

## Introduction

Burn injuries are in many aspects the worst of all tragedies an individual can experience. A major burn is accompanied by an overwhelming insult to the patient, both physically and psychologically. Also, it may be catastrophic in terms of cost and suffering to the family involved. Injuries are often a result of victim's own action and occur at home. This is particularly true for older adults and children (Livingston et al, 2001).

Burn injuries are the third leading causes of accidental death in all aged group. Males tend to be injured more frequently than females except in the elderly according to Ibrahim (1990) the available statistic in Egypt (1980) death rate due to burn was 3.3 / 100.000 population. Meanwhile in the United States, two million people seek medical attention every year, of these 70.000 are hospitalized with severe injury (Black and Jato, 1993).

The economic costs from burn injury recovery rise into the billions of dollars, as do the social costs from days lost from work, and physical and vocational rehabilitation. Scald injuries are the most frequent type of burns, but the major cause of severe burn is flame injury that is more serious (Cromes et al, 2002).

Patient who suffer burn injuries face many challenges. Short and long-term recovery from severe burns can cause extreme distress in patients because of their devastating physical and psychological consequences. Therefore, they require specialized care. A multidisciplinary team, including surgeons, nurses, physical and occupational therapists, social workers, microbiologists, and psychologists, is involved in the approach of care. Moreover, these patients need critical care, including wound care, infection control, as well as rehabilitation programs (Hurlin-Foley et al, 2000).

Physical and psychological measures are begun in the critical care unit, and continued through the entire recovery period. However, rehabilitation, as the third stage of treatment, begins when the patient's burn is reduced to less than 20% of total body surface area, and the patient is capable of assuming some self-care activity. The principles of management are to return the patient to a productive place in the society, and to accomplish functional and cosmetic reconstruction. Rehabilitation does not end when the patient is discharged. It may take more time for the patient to reach a maximal level of emotional and physical adjustment (Redlick et al, 2002).

The patient must be encouraged to participate as much as possible in his/her own care. Independence in activities of daily living is supported. Some patients require more encouragement than others in assisting with tasks such as wound care. It is important that the patient be involved in developing a daily plan of care, including meal selection, time of treatment, rest periods, therapy, and socialization. The occupational therapist aids in the process by selecting activities appropriate to patient's medical, physical, and mental status. These activities are self-feeding, burn wound management, or assisting with grooming (Chedekel and Tolia, 2001; Clarke and Cooper, 2001).

Burn injuries are common in our hospitals and health care settings. The burden of these incidents is high on the individual patient, the family, and the community, as well as on the health care providers. If not managed properly, both physically and psychologically, it might have major untoward effects on the quality of life of the patient.

## The Aim

This study aimed to design and implement self-care strategies for burn patients based on needs assessment, and to evaluate the effect of its application on burn patients' physical and psychological aspects.

## Subjects and Methods

### Design

A quasi experimental design, with pre-post and follow up assessment was utilized in this study to measure the effect of self-care strategies on the patients with burn injury.

### Setting

This work was done at the burn unit at El-Demerdash Hospital to teach patients self-care strategies, and at the outpatient clinics to follow these patients after discharge.

### Sample

The study sample included 60 patients who were selected through systematic random sampling from the patients admitted from October 2003 to April 2004 according to the determined inclusion criteria. These were having a second degree burn injury, and being able to engage and perform the self-care activities. The group included 31 males and 29 females, with mean age  $34.7 \pm 10.5$ , and various levels of education. Most of the patients (70.0%) were married.

### Tools

Three different tools were used for data collection.

- **Patient needs assessment sheet:** was developed and filled by the researchers through individualized interviewing with patients before providing the self-care strategies. It consisted of three main parts. The first part was concerned with assessment of physical need, which covered mobility, communication, activities of daily living, bowel and bladder functions, discomfort, and alertness. These were rated on a 5-point scale ranging from totally dependent to totally independent. The second part involved the psychological needs, which included depression, anxiety, and attitude toward treatment. The third part was for social needs. It covered practical support, medical support, non-medical supports (religious, occupational, social, recreational, and political), and financial security.
- **Knowledge assessment form:** a structured interview form was developed and filled by the researchers through individualized patient interviewing to assess knowledge regarding burn injury and its management. It consisted of a part for knowledge about the definition, types, degrees, and complications of burn injury. The third part included questions about self-care related knowledge. This form was filled out before and after the self-care strategies intervention, and then three month after discharge as a follow-up for the care provided to the patient.
- **An observation checklist:** designed by the researchers based on identified standard of nursing care given to the burn victims. It aimed to assess patient's performance of self-care activities. It included 12 steps related to wound assessment and wound care, garment care, range of motion, and personal hygiene.

The observation was done pre/post and follow up for three month after patient's discharge from the burn unit.

### **Pilot study**

A pilot study was conducted on six patients in the burn unit in order to test the feasibility of the study setting, validity and reliability of the developed tools, and time required for completing each study tool. These patients were not included in the main study sample. Results obtained were useful in appraisal and modification of the tools.

### **Procedures: (Intervention)**

At first, an official letter was issued to the director of El-Demerdash hospital and the director of burn unit to get the permission for data collection and implementation of the self-care strategies. Data collection started at the assessment phase and lasted from October 2003 until through April 2004. The burn unit was visited 3 time/ week, until the patients were discharged. Follow up was done to those patients in the outpatient clinic for three months

Each patient was interviewed individually. Needs assessment before program implementation took about 30 minutes for each patient. The knowledge interview sheet took another 30 minutes with each patient, while observation checklist needed 60 minutes for each patient. Interviews and observation were done three times, before / after program and follow up for one month after discharge.

The content, sessions, teaching methods and media were prepared and organized into an instructional plan. A booklet was designed by the researchers to include the self-care strategies. It was used to teach patients self-care activities. It covered the definition, classification, as well as complications of burn injuries. Self-care activities were related to wound care, range of motion, personal hygiene, and care of the garment.

To ensure equal exposure of all subjects to the same learning experience, each of them received the same content using the same teaching strategies, discussion, teaching demonstration and re-demonstration with the assistance of the booklet. It was necessary to explain to the patients that the data will be confidential and would be used only to improve their health condition.

### **Results**

The socio-demographic characteristics of burn patients in the study sample are described in table 1. The age of more than half of the study sample was less 40 years (61.7%), with a mean  $34.7 \pm 10.5$  SD years. Males were slightly more preponderant (51.7%). The majority of the patients were married (70.0%). Concerning educational level, 20.0% of the study samples were illiterate, and 10.0% had high education.

Patients' needs were assessed before design of the strategies. Table 2 indicates that the physical needs with highest percentage were those of help with daily life activities and mobility, 30.0% and 28.0%, respectively. Totally, 15.0% of the patients had physical needs. As regards psychological needs, one fifth of the patients (20.0%) had depression and 6.7% had anxiety. Concerning social needs, the highest need was for non-medical support (36.7%), followed by the need for medical support (28.3%). Also, 26.7% had financial problems. Overall, 23.3% of the patients had some identified needs.

The knowledge related to burns among patients has shown statistically significant improvements in almost all its aspects throughout the intervention phases,  $p < 0.001$  (table 3). The highest level of satisfactory knowledge attained both at the post and follow-up tests was related to the types of burn, 91.7% and 81.3%, respectively. Conversely, knowledge about self-care related to elastic bandage was nil (0.0%) at the pre-test, and increased to 15.0% at the post-test, but regressed again to 2.1% at the follow-up.

Table 4 also points to statistically significant improvement of patients' performance throughout the program,  $p < 0.001$ . This was evident in relation to wound assessment, wound care, personal hygiene, and range of motion. Only care of garment did not show statistically significant improvement. Meanwhile, the total performance has improved from 0.0% at the pre-program phase, to 35.0% at the post-program phase, but declined to 22.9% at the follow-up,  $p < 0.001$ .

Table 5 illustrates the results of two important outcomes of burn, namely ability to look and touch burned area, and the return to normal social activities. The first outcome has shown statistically significant improvement from the pre to the post and follow-up phases, 38.3%, 51.7% and 64.6%, respectively,  $p = 0.03$ . Conversely, the return to normal social activities did not show such statistically significant improvement.

Multivariate analysis was done to identify the independent predictors of knowledge score devoid of confounding factors. Table 6 presents the best fitting multiple backward stepwise regression model for knowledge score, as the dependent variable, and patients' socio-demographic characteristics, as the independent variables. It indicates that the intervention and the level of education were the only statistically significant independent predictors of the knowledge score. They were both positive predictors, and together, they explained 51% of the variation in the knowledge score, as indicated by the value of r-square (0.51).

A similar model was constructed for patients' performance score, as a dependent variable, and their socio-demographic characteristics, as independent variables. Table 7 indicates that the score of performance was statistically significantly and independently predicted by the intervention, the score of knowledge, and the score of needs. This latter was a negative predictor of performance score as indicated by its beta coefficient (-0.16). All these factors explained 58% of the variation in the knowledge score, as indicated by the value of r-square (0.58).

**Table (1): Socio-demographic characteristics of burn patients in the study sample (n=60)**

	Frequency	Percent
<b>Age (years):</b>		
<40	37	61.7
40+	23	38.3
mean±SD	34.7±10.5	
<b>Gender:</b>		
Male	31	51.7
Female	29	48.3
<b>Marital status:</b>		
Married	42	70.0
Unmarried	18	30.0
<b>Education:</b>		
Illiterate	12	20.0
Read/write	24	40.0
Basic/intermediate	18	30.0
High	6	10.0

**Table (2): Needs assessed among burn patients in the study sample (n=60)**

	<b>Frequency</b>	<b>Percent</b>
<b>Physical needs:</b>		
Need help with:		
Mobility	17	28.3
Communication	10	16.7
Daily life activities	18	30.0
Bowel/bladder functions	7	11.7
Have discomfort	12	20.0
Have alertness/mentation problems	6	10.0
Total physical	9	15.0
<b>Psychological needs:</b>		
Have depression	12	20.0
Have anxiety	4	6.7
Have pessimistic attitude	9	15.0
Total psychological	9	15.0
<b>Social needs:</b>		
Need practical support	8	13.3
Need medical support	17	28.3
Need non-medical support	22	36.7
Have financial problems	16	26.7
Total social	11	18.3
<b>Total needs</b>	<b>14</b>	<b>23.3</b>

**Table (3): Knowledge related to burns among patients in the study sample throughout the intervention phases**

Satisfactory knowledge about:	TIME						Chi-Square Test	p-value
	Pre (n=60)		Post (n=60)		FU (n=48)			
	No.	%	No.	%	No.	%		
<b>Burn:</b>								
Definition	7	11.7	47	78.3	38	79.2	69.98	<0.001*
Types	20	33.3	55	91.7	39	81.3	52.33	<0.001*
Degrees	4	6.7	42	70.0	33	68.8	61.04	<0.001*
Complications	4	6.7	47	78.3	10	20.8	73.59	<0.001*
<b>Total burn</b>	4	6.7	54	90.0	32	66.7	88.39	<0.001*
<b>Self care:</b>								
<b>Suitable diet</b>	5	8.3	41	68.3	37	77.1	63.80	<0.001*
<b>Level of activities</b>	4	6.7	36	60.0	33	68.8	52.23	<0.001*
<b>Self-dressing</b>	6	10.0	40	66.7	26	54.2	42.85	<0.001*
<b>Self-bathing</b>	1	1.7	43	71.7	35	72.9	77.09	<0.001*
<b>Wound care</b>	0	0.0	31	51.7	23	47.9	44.38	<0.001*
<b>Pain relief with dressing</b>	3	5.0	35	58.3	24	50.0	41.60	<0.001*
<b>Wearing elastic bandage</b>	0	0.0	9	15.0	1	2.1	--	--
<b>Total self-care</b>	0	0.0	40	66.7	24	50.0	60.58	<0.001*
<b>Total knowledge</b>	1	1.7	53	88.3	36	75.0	103.00	<0.001*

(\*) Statistically significant at  $p < 0.05$ 

(-- ) Test result not valid

**Table (4): Performance related to burn care as observed among patients in the study sample throughout the intervention phases**

Adequate performance of:	TIME						Chi-Square Test	p-value
	Pre (n=60)		Post (n=60)		FU (n=48)			
	No.	%	No.	%	No.	%		
<b>Wound assessment</b>	8	13.3	30	50.0	25	52.1	23.31	<0.001*
<b>Wound care</b>	0	0.0	25	41.7	15	31.3	30.76	<0.001*
<b>Personal hygiene</b>	6	10.0	38	63.3	36	75.0	54.41	<0.001*
<b>Range of motion</b>	0	0.0	14	23.3	7	14.6	15.20	<0.001*
<b>Care of garment</b>	0	0.0	6	10.0	3	6.3	--	--
<b>Total performance</b>	0	0.0	21	35.0	11	22.9	24.49	<0.001*

(\*) Statistically significant at  $p < 0.05$

(--) Test result not valid

**Table (5): Outcome of burn among patients in the study sample throughout the intervention phases**

Outcome	TIME						Chi-Square Test	p-value
	Pre (n=60)		Post (n=60)		FU (n=48)			
	No.	%	No.	%	No.	%		
<b>Able to look at and touch burned area</b>	23	38.3	31	51.7	31	64.6	7.39	0.03*
<b>Return to normal social activities</b>	7	11.7	7	11.7	10	20.8	2.35	0.31

(\*) Statistically significant at  $p < 0.05$

**Table (6): Best fitting multiple backward stepwise regression model for knowledge score (dependent variable) and patients' socio-demographic characteristics**

	<b>Beta Coefficient</b>	<b>Standard Error</b>	<b>t-value</b>	<b>p-value</b>
<b>Constant</b>	10.31	4.20	2.46	0.015*
<b>Educational level (reference: illiterate)</b>	3.71	1.30	2.86	0.005*
<b>Intervention (reference: pre)</b>	18.59	1.47	12.65	<0.001*

(\*) Statistically significant at  $p < 0.05$

$r$ -square=0.51

model ANOVA:  $F=86.51$ ,  $p < 0.001$

**Table (7): Best fitting multiple backward stepwise regression model for performance score (dependent variable) and patients' socio-demographic characteristics**

	<b>Beta Coefficient</b>	<b>Standard Error</b>	<b>t-value</b>	<b>p-value</b>
<b>Constant</b>	12.89	6.53	1.97	<0.05*
<b>Gender (reference: male)</b>	-3.75	2.11	1.78	0.08*
<b>Intervention (reference: pre)</b>	8.60	1.85	4.66	<0.001*
<b>Score of patient needs</b>	-0.16	0.07	2.26	0.025*
<b>Score of knowledge</b>	0.46	0.07	6.71	<0.001*

(\*) Statistically significant at  $p < 0.05$

$r$ -square=0.58

model ANOVA:  $F=56.28$ ,  $p < 0.001$

## Discussion

Successful self-care management of problems in patients with burn injury requires an active partnership between the patient and health care providers. This can be facilitated through a focused patient education strategy that begins in acute care stage, and continues into the patient's home. Elements of the education strategy should involve both teaching content areas and self-management. Learning and effective education for burn victims group were considered an integral component in improving patient quality of life, and in reducing hospital readmissions (Dunbar and Jacobson, 1998).

The aim of this study was to design and implement self-care strategies for the patient with burn injury, and to evaluate their effect patient's physical and psychosocial aspects.

According to El Kateb (1992), the main objectives of patient rehabilitation are to improve patient health condition, continuity of care, and most importantly optimizing self-care dependence. This could allow the patient to return to normal lifestyle, and perform a productive activity. Moreover, the psychosocial status of the patient is an important indicator of rehabilitation. More recently, the overriding objective of burn care has become reintegration of the patient into the home and community. This goal has extended the traditional role of the burn care team beyond acute wound closure. Burn rehabilitation is undeniably difficult and time consuming, but the time spent on outlining short-term and long-term treatment goals and modalities is worthwhile. These goals and daily schedules ideally are posted where the patient and family can review them easily, thereby reinforcing the expectation that the goals be met. The treatment goals and strategies vary depending on the patient's injury, stage of treatment, age, and co-morbidities (Sheridan et al, 2000).

Needs assessed among burn patients in the present study has revealed many physical needs such as support during mobility, in communication, daily life activities, and in bowel bladder functions. Also there were complaints from discomfort, alertness, and mentation problems. Psychologically, about one quarter of the patients had depression, anxiety, and pessimistic attitude. As for social need, patients needed practical, medical, and non-medical support. Many had financial problems. These results are congruent with Simons et al (2004) who have mentioned that the physical and emotional trauma of burn injury must be balanced against the patient's functional and cosmetic needs.

On the same line, Davis and Sheely-Adolphson (1997) have emphasized that the devastating nature of a thermal injury drastically alters both the physical and psychological elements of the survivors. Understanding the physiological and psychological processes of burn patients in all phases of recovery enables the caregiver to provide optimal holistic treatment to the patient.

It was shown in the current study that many patients had financial problems, and needed non-medical support. This result is congruent with Pessina and Ellis (1997) who have stated that families may be provided with financial help for food and shelter. Family services should also provide emotional support, education about burn treatment, and psycho-therapeutic interventions, if necessary, to enhance the family's ability to provide an appropriate milieu for patient recovery.

The physical need to medical support has also been highlighted by Winfree and Barillo (1997), who have stressed that the return to optimal function for patients

who sustain burn injury depends on immediate emergency care. As for social needs, the burn injury has been characterized as a frightening and potentially life-changing event for patients and families. Burned patients and families often experience loss or change in their lives. It is understandable that patients and families may face many difficult emotions including depression, anger, frustration, fear and anxiety. Dealing with the emotional stress involved in a burn injury is an important part of accepting and recovering from burn injury (Sheridan et al, 1999; Sheridan et al, 2002).

The results of the present study have revealed marked deficits in patients' knowledge related to definition, degrees, and complications of burn injury. This was also true as regards their self-care knowledge. In fact, most of them had very little knowledge about suitable diet, level of activities, self-dressing, self-bathing, wound care, and pain relief with dressing. They had no knowledge regarding wearing elastic bandage. This could be attributed to the lack of rehabilitation programs before discharge, lack of patients' instructions or discussions, and lack of specialized nurses. Moreover, doctors seem to have no time to give for patient education post-operatively. In this respect, Stoddard et al (1992) have emphasized that, patients should be aware of what has happened to them after the burn injury to avoid the fearful and uncomfortable feelings with different procedures. The author has also added that family education and involvement with rehabilitation plans may facilitate early identification of evolving problems, and rectify rehabilitation efforts.

Furthermore, Sheridan et al (1995) have stated that it is important for the patient to understand the potential benefits of exercises, and the importance of self-bathing, and self-dressing. Additionally, compression garments seem to improve control of broad areas of hypertrophic scarring. It should be worn 23 hours a day until wound erythema begins to abate, usually about 12-18 months after injury. Garment fit must be verified after manufacture, as a poorly fitting garment is less effective, and can be uncomfortable.

According to the present study findings, patients' level of knowledge has significantly improved after application of the strategies, and continued during the follow-up phase. This finding points to success of the program in achieving its aim. However, the possible confounding effect of other factors such as the level of education cannot be overlooked. The effect of education was remarkable as shown by the statistically significant differences between the illiterate and educated patients before and after the program, which is certainly explained by the level of understanding and participation during the teaching sessions. This was further supported by the multivariate analysis, which has shown that education was an independent predictor of the score of knowledge, but not of practice. Nevertheless, still the program had the major effect on the knowledge score, according to the best fitting regression model.

Patients' performance related to burn care has also demonstrated statistically significant improvements post program. This may be attributed to the perceived importance of the program, in addition to the proper methods and media that were used in teaching. Also, it was shown that the performance was adequate at the follow-up stage. This might be due to patients' interest in promoting their health, adapting to their new lifestyle, as well as preventing any further complications.

The foregoing results are in consistence with Berger and Wilson (2004) who have added that for many burn patients, the first 18 months after discharge are more difficult than the acute stage. So the principal rehabilitation goals at this time are very

important, and should include progressive range of motion (ROM) and strengthening exercises, and evaluation of evolving problem areas. Effective management of burn injury often requires lifestyle changes for the patient, including, personal hygiene, range of motion, care of garment, wound assessment, and wound care. These authors have also emphasized the importance of education as a basic tool in burn care, and that the individuals with burn injury should have the necessary knowledge and skills to manage their condition, and increase their potential to lead a healthy and active life. Without proper education and management skills, burn injury care can be frustrating and difficult to live with.

Furthermore, Duncan and Dirscall (1991) have highlighted the importance of follow-up of wound care to prevent wound infections. The care should focus on daily wound monitoring and assessment, hydrotherapy, debridement, pain control, nutrition, and continued rehabilitation needs. Also, daily assessment of the wound area is essential to detect purulence, odors, increased tenderness, sloughing, or shearing.

Before program implementation, none of the present study patients was observed to correctly perform the range of motion exercises. This is undoubtedly due to lack of knowledge regarding the importance of the ROM to reduce the contracture, in addition to and the fear from pain. In this respect, the American Medical Association (1995) has mentioned that the range of motion can be encouraged by allowing the patient to accomplish all possible activities of daily living by him/ herself. Brushing hair or teeth, feeding self, ambulating to bathroom or hydrotherapy room, and assisting with wound care can facilitate active range of motion. Moreover, active exercise to the patient with burns should begin early each day. A schedule of planned activities should be implemented with frequent exercise periods of short duration, 3 to 5 minutes each hour. Long periods of exercise will increase muscle tone and prevent loss of lean mass (Cioffi and Rue, 1991). Additionally, early standing and ambulation and participation in daily living activities is important, and all extremities should be actively moved frequently throughout the day. Proper positioning is essential for the prevention of contractures. Also, the joints of all extremities should be frequently moved throughout 24 hour/day unless there is a strong contraindication. Patients with open wounds from escharotomies or fasciotomies can usually move these parts actively (Rose and Jordan, 1999).

Similar to ROM, the present study findings have shown that none of the patients did garment care before the program. The improvement in this practice after the program was minimal. This might be due to patients being not accustomed to such intervention, in addition to fear and anxiety. The importance of garment care has been emphasized by Carr-Collins (1992) and Kischer (1992), who have stated that elastic garments should be worn 24 hours a day over all burned area until the scar fully matures. Two garments should be made available for each patient, so that a clean one will be ready for use after the daily bath.

Although, it is conceivable that changing patient's attitude is not an easy achievement, the program was effective in changing patient negative attitudes related to return to normal social activities. The negative attitude often observed among burn patients is attributed to their worries and fear of rejection from family and friends due to disfigurement resulting from the burn injury. The change of patients' attitude towards positive side is quite important in their rapid recovery, and would certainly be associated with better prognosis. This is in line with Daniels and Fenley (1991) who have claimed that patient's attitude and motivation are powerful factors that affect

burn rehabilitation. The survival often is in doubt, and immediate psychiatric issues dominate including anxiety, fear, pain, sleep deprivation, and confusion.

Furthermore, Summers (1991) and Squyres et al (1993) have signaled that attitude and psychological well-being play powerful roles, either helpful or destructive, in physical recovery. The importance of understanding this concept cannot be overemphasized. Every member of the burn team can have a strong and favorable impact by considering these two factors during day-to-day patient interactions.

### **Conclusion:**

Based on the study findings, it is concluded that burn patients have social and psychological needs more than physical needs. A self-care program provided by community health nurse and surgical nurse based on assessment of these needs was successful in improving burn patients' knowledge and practice related to this type of injury.

### **Recommendations**

In the light of the study results, it is recommended that self-care programs be applied to help burn patients and improve their prognosis. Nurses should be able to assess the physical, psychological and social needs of these patients to tailor appropriate programs for them. Long-term studies are recommended to assess the long-term effects of such programs on burn patient's quality of life and return to normal social activities.

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## الملخص العربي

### التأثيرات الجسمانية و النفسية لتطبيق استراتيجية العناية الشخصية لمرضى الدرجة الثانية من الحروق

#### المقدمة:

إن الحروق الكبيرة تؤدي إلى أذى نفسي و جسدي شديد لمرضى الحروق وعلية فإن مرضى الحروق يحتاجون إلى خطة عناية خاصة يومية بهم.

#### هدف الدراسة:

وقد هدفت هذه الدراسة لتصميم وتنفيذ إستراتيجية خاصة للعناية بمرضى الحروق تعتمد على احتياجاتهم وعلى التقييم اليومي للإستراتيجية.

#### عينة البحث:

وتمت هذه الدراسة على 60 مريض بالدرجة الثانية من الحروق بوحدة الحروق بمستشفى الدمرداش. وتم تطبيق طريقة الكوازي على الاختبارات القبلية و البعديه والمتابعة وهذه الطريقة كانت مناسبة للعينة المختارة للبحث الذي استمر من أكتوبر 2003 إلى أبريل 2004 وتم استخدام ثلاثة طرق مختلفة للاستبيان وهي (1) تقييم احتياجات المرضى (2) معلومات المرضى (3) أداء المرضى في العناية الخاصة بأنفسهم. وقد تم إعداد كتيب وزع على المرضى و مرافقيهم متضمنا طرق العناية الشخصية التي يستعين بها المريض ومرافقيه للعناية الخاصة.

#### النتائج:

وقد وجد أن 15% من المرضى يحتاجون للمساعدة الجسدية وأن حوالي 20% منهم أصيبوا بالاكنتاب و 607 منهم أصيبوا بالقلق.

وقد لوحظ تحسن ذو دلالة إحصائية على معلومات وأداء المريض في كل أوجه العناية بعد تعلمه طرق العناية الشخصية. وقد دل على ذلك تحسن قدرة المريض على النظر ولمس منطقة الحرق بنفسه. مما دل على تحسن نوعى بين المرضى بعد البرنامج التعليمي الذي أعطى للمرضى.

وقد انتهت الدراسة ألي : أن مرضى الحروق يحتاجون إلى مساعدة نفسية واجتماعية أكثر من المساعدة الجسدية.

وقد خلصت الدراسة أيضا إلى أن لمرضة صحة المجتمع دور هام وبارز في متابعة المرضى بعد الخروج من المستشفى مستكاملة لدور ممرضة الجراحة و الباطنية للوصول إلى أحسن أداء يمكن أن يساعد المرضى للوصول ألي أعلى مستوى من معلومات العناية الخاصة بعد الحرق.