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EMERGENCY CONTRACEPTION AND THE ROLE OF THE NURSE IN COUNSELING

Article Review
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Introduction

Despite the availability of effective methods of contraception, many pregnancies are unplanned and unwanted. These pregnancies carry a higher risk of morbidity and mortality, often due to unsafe abortion. Many of these pregnancies can be avoided using emergency contraception.

Definitions of emergency contraception

Emergency contraceptive pills (ECPS) are hormonal methods of contraception that can be used to prevent pregnancy following an unprotected intercourse. Unprotected intercourse includes the following situations:

- Method did not function properly such as condom tear
- No method used in, as in case of rape.
- Method used incorrectly, such as missed pills or failure to withdraw.
- IUD expulsion

Formulations and dose required for ECPS

1. ***Progestin- only pills regimen:***

   First dose (O.75mg of levonorgestrel) should be taken as soon as possible, and not later than 72 hours after unprotected intercourse.

   The same dose is repeated, 12 hours after the first dose

2. ***Combined oral contraceptive pills regimen (known as Yuzpe regimen)***

Each dose should contain at least o.1 mg of ethinyl estradiol and 0.5mg of levonogestrel (i.e 4 tablets of the standard dose COCs).

First dose must be taken as soon as possible and not later than 72 hours after unprotected intercourse.

The same dose is repeated 12 hours after the first dose.

Note: The sooner ECPS are taken after unprotected intercourse, the more effective they are.

Possible mechanisms of action depending on the time of administration during the menstrual cycle, the pills may:

- Inhibit or delay ovulation
- Have other contraceptive effects after ovulation

Remember that they do not interfere with already established pregnancy and they are safe, no deaths or serious medical complication have been reported. Moreover, they are readily available and reduce the risk of unwanted pregnancy or abortion.

Possible Side effects

- Most common nausea and vomiting
- Less common: headache, dizziness, fatigue, breast tenderness, irregular bleeding and spotting.

Side effects are more common with COCs regimen than the POPs regimen.

The Role of the nurse in counseling

- The nurse should provide ECPS in a manner that is respectful of the client and responsive to woman needs for information and counseling. During counseling the nurse should reassure all clients, regardless of age or marital status, that all information would be kept confidential.
- The nurse should be as supportive of the client's choices and refrain from making judgmental comments or indicating disapproval while discussing ECPS with clients. Supportive attitude will help improve compliance and set the stage for effective follow-up counseling about regular contraceptive and sexually transmitted disease prevention.
- Whenever possible ensure that counseling is conducted in a private and supportive environment. Clients may feel anxious after unprotected intercourse due to; fear of becoming pregnant, worry about missing the 72 hour window of opportunity for emergency contraception and embarrassment at failing to contraception.
- Emphasize that ECPS are for emergency use only and should not be used as an alternative to regular ongoing contraception. Whenever possible, clients requesting ECPs should also offer information and services for regular contraceptives.
- The client should be screened for ECPS use by; taking the history of the date of last menstrual period and whether it was normal to exclude the possibility that the client may already be pregnant. The nurse should establish the time of the first episode of unprotected intercourse since the last menstrual period, to ensure the client is within the 72 hour treatment timeframe. Other health assessment (Physical examination and investigation) is required as part of routine health service if medically indicated. The nurse should ask if the client is currently using a regular method of contraception.
- Woman should be provided with basic information about ECPS before receiving emergency contraceptive pills. Such information includes discussion of how and when to take the pills correctly, possible side effects and their management. Tell the client that drinking milk or eating a snack with the pills or taking them near bedtime may help reduce nausea. Help the client decide on the appropriate time to take the first dose so that taking the second dose 12 hours later will not be inconvenient. However the first dose should not be delayed unnecessarily as efficacy may decline overtime.
- Explain to the woman that the dosage needs to be repeated if the client vomits within 2 hours of taking ECPS.
- A common misperception among client that, ECPS will protect her from pregnancy if she engages in unprotected intercourse in the days or weeks following the treatment. In

this case advise the client to use a barrier method such as the condom, for the remainder of the cycle. Also the client should understand that her period would not come immediately; it may come a few days earlier or later than normal.

- Advise the client to visit the clinic if there is a delay in her menstruation of more than one week; if she has any reason for concern; or as soon as possible after the onset of the menstrual period for contraceptive counseling
- Use simple written instructions to help reinforce important messages about the correct use of ECPS, follow up and how to initiate regular contraception.
- When initiating regular contraception after ECP use *Remember the appropriate timing as follows;*

Condom; Can be used immediately

Diaphragm; Can be used immediately

Spermicidal; Can be used immediately

Oral contraceptives; Initiated either immediately or within five days of the beginning of the next menstrual cycle (or according to the instructions for the type of pill being used). If the client chooses to continue using a low- dose COC for the remainder of the menstrual cycle immediately following ECP use, she should also use a barrier method during the first seven days when COCs are started mid-cycle.

Injectable; Initiated within seven days of the beginning of the next menstrual cycle

IUD; Initiated during the next menstrual cycle

Natural Family Planning; May need to abstain from sex or use a back-up method such as condoms for one or more menstrual cycles to ensure regularity

Implants; Initiate within seven days of the beginning of the menstrual cycle

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Female Mutilation

Article Review
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Introduction

The subject of female genital mutilation (FGM), which has been buried in secrecy and taboo for several generations, is finally being brought to the surface by feminists, health practitioner, and social scientists concerned with the physical and moral well being of women and girls.

FGM constitutes all procedures which involve partial or total removal of the external female genital organs or injury to the female genital organs whether for cultural or any non therapeutic reasons (Duncan and Herland, 2000; WHO, 1998; & Essen et al, 2000).

There are different types of FGM known to be practiced today, they include type I (Sunna Circumcision). The most common type of FGM is excision of the clitoris and the labi minora accounting for up to 80% of all cases; the most extreme formis infibulation, which constitute 15% of all procedures. (US. Department of state. Egypt, 2001; & www.forwarduk.org, 2004).

The justifications given for the practice are multiple and reflect the idiological & historical situation of the societies in which it has developed. Reasons cited generally relate to tradition, power inequalities and the ensuing compliance of women to dictates of their communities. (WHO, 1997; www. research.umbe., 2002; & Sarah R, Hyford, 2005).

The root of female genital mutilation are complex and numerous; it has not been possible to determine when & where the tradition of FGM originated. Many women believe that FGM is necessary to ensure acceptance by their community; they are unaware that FGM is not practiced in most of the world. FGM is usually performed by traditional practitioner with crude instruments & without anesthetic. (WHO, 1997; WHO, 2001; & Sarah R, Hyford, 2005).

FGM causes grave damage to girls and women and frequently results in short and long term health consequences.The effect on health depends on the skill of the operator, the cleanliness of the tools and the environment and the physical condition of right or women concerned.(Elchalal, 1997; Essen,2000; & Obermeyer,2003).

The immediate and long term health complication include sever pain, shock, urine retention, injury to adjacent tissue. Hemorrhage and infection can cause death. More recently, concern has arisen about possible transmission of immunodeficiency virus (HIV) due to the use of one instrument in multiple operations WHO, 1998; & www.forwarduk.org, 2004).

Long term consequences include cysts and abscess, keliod scar formation, urinary incontinence, dysparonnia (painful sexual intercourse) & difficulties with child birth. Psychological health: Genital mutilation may leave a lasting mark on the mind of the women who has undergone it. In the long term, women may suffer feeling of irritability & depression.(Duncan and Herland,2000; Essen,2000;& Obermeyer,2003).

Experiences show that many people in the societies concerned do not naturally see the link between genital mutilation suffered by a women in her childhood and pain, infection and health problems she may suffer in her later years.(www.research.umbe,2002; & Abd El – tawab,2003).

Globally, WHO estimate that between 100 and 132 million girls and women have been subjected to FGM. Each year, a further 2 million girls are estimated to be at risk of the practice. Most of them live in African countries, a few in the Middle East & Asian countries, and increasingly in Europe, Australia, Newzealand, United State of America & Canada (WHO, 1998; & WHO, 2001).

In Egypt the most common forms of FGM or female genital cutting (FGC), still widely practiced throughout Egypt are type I & type II. These practices are wide spread but are even more prevalent in rural than urban areas. They are common among both Muslims & Coptic Christians. Type III in Egypt is referred as “Sudanese Circumcision” is founded only among a few ethnic groups in southern part of the country (WHO, 2001; &www. research. umbe, 2002).

In 2000, U S Agency for International Development (USAID) funded the fourth in a series of Demographic and Health Surveys (DHS) conducted in Egypt. This nationally representive survey of 15.648 ever married aged 15 – 49 found that the practice is nearly universal among women of reproductive age in Egypt. Preliminary analysis 2000 finding show that 97% of women surveyed have undergone this procedure. 78% in 2000 versus 83% in 1995. and intention of women surveyed to have their daughters undergo one of these procedure 31% in 2000 versus 38% in 1995. (WHO, 2001; US. Department of state. Egypt,2001;& www.forwarduk.org, 2004).

Many Egyptian believe that this is an important part of maintaining female chastity, which is part of religious tradition. One of the main factors behind the

persistence of the practice is its social significance for female. In communities where it is practiced, a woman achieves recognition through marriage & child bearing and many families refuse to accept as marriage partner, a woman who has not under gone the procedures. (WHO, 2001; & US. Department of state. Egypt, 2001).

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EFFECT OF A HEALTH EDUCATION INTERVENTION ON CONTROLLING OF URINARY INCONTINENCE AMONG ELDERLY WOMEN IN ZAGAZIG CITY

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Abstract

Background: urinary incontinence is a significant health problem with serious physical, psychological and social consequences, particularly among elderly women. Self-care is one way that individuals can use to cope with physical symptoms, and stress. **Aim:** to assess the knowledge, physical and psychological complaints of urinary incontinence in elderly women, and to evaluate the outcome of a self-care management intervention of urinary incontinence. **Subjects And Methods**: the study was conducted at the geriatric social club in Zagazig City, using a quasi-experimental design with pre-post assessment. It included 50 women, 60 years old or above, with urinary incontinence for at least one year. They were divided into two equal groups, a study group for application of the intervention, and a control group. Three tools were used for data collection: an interview questionnaire form, a knowledge assessment sheet, and a voiding training record. A health education intervention for voiding training was provided to subjects in the intervention group for six-months. Data were collected during the period from June to December 2004. **Results:** Before the intervention the medical history and independence in daily life activities were similar in the two groups, and also their psychological complaints. They had no differences of statistical significance concerning knowledge about urinary incontinence, which was very low in the two groups. After the intervention, statistically significant improvement in knowledge was found in the study group. Before the intervention the frequency of wetting underwear showed no differences between the two groups. After the intervention, the frequencies were markedly lower in the study group, especially after the third day, where the means were all below 3 times, compared to more than 4 times in the control group. Similarly, a significant increase in the frequency of using WC was shown among women in the study group after the intervention. **Conclusion**: there is a lack of knowledge about the condition. Implementation of a health education intervention proved to an effective self-care practice for management of the problem. **Recommendations**: elderly people need periodic screening of for early detection and management of urinary incontinence. Nurses (either community or psychiatric) needed to be trained in more specialized aspect of care of incontinence elderly including health education intervention about how to mange incontinence. Health education for elderly are needed about self care management of incontinence, mass media could provide both the public and patient social support to the elderly by accurate information about management of incontinence.

Keywords: Nursing intervention program, Kegel exercises, Health education

Introduction

Urinary incontinence is defined as the complaint of any involuntary leakage of urine. It is recognized as a significant health problem with serious physical, psychological and social consequences. Although many older adults suffer from this condition, all age groups can be affected *(Bo, 2004)*.

Urinary incontinence affects 15 to 30% of community dwelling older individuals, up to one third of elderly patients in acute care setting, and approximately 50% of residents in long-term care facilities. In total this problem affects approximately 13 million Americans. Urinary incontinence is twice as common in women as in men *(Jay, 1998 & Ouslander et al, 2005).* It is a common problem in female population, with prevalence rates varying from 10% to 55% in 45 to 64 years old women. The most frequent form of urinary incontinence in women is stress incontinence, defined as involuntary leakage on effort or exertion, or on sneezing or coughing *(Bo, 2004)*.

In Egypt, a study conducted at the outpatient geriatric clinic in Ain Shams University has revealed that the prevalence of urinary incontinence was 30.81%. Of those, 54.1% were females *(Mohamed, 1997)*. The majority of urinary incontinence sufferers are women. The causes of urinary incontinence include, pregnancy, childbirth, menopause, spinal cord injury, excessive caffeine intake, and as side effects of drugs *(Noelker, 2000)*.

Pelvic floor muscles are just like other muscles. Exercise can make them stronger. Women with bladder control problems can regain control through pelvic muscle exercises, also called Kegel exercises. Exercising pelvic floor muscles for just five minutes, three times a day can make a big difference to bladder control *(Zaccardi, 2004)*. Pelvic muscle exercises have been used primarily in the management of mild to moderate stress incontinence in women. Improvement rates vary from 31 to 91 percent *(Well, 2000)*.

Self-care is defined as the practice performed by individuals in order to maintain his maximum state of will being. Self-care model allows clients to be involved in the decision making specific to their plan of health care *(Chin and Karmer, 1995)*. Self-care has also been defined as the production of action directed to self or to the environment in order to regulate one's life integrated functioning and wellbeing. It is one way that individuals can use to cope with physical symptoms, stress, and relationships demands *(Miller, 1999)*.

Until recently, surprisingly little is known about urinary incontinence assessment and management. Nurses, especially community health nurses, need to take a protective stance to the identification of incontinence in women and decide on a plan of care *(Well, 2000)*.

Aim of the study

This study is aimed at assessment of knowledge, physical and psychological complaints of urinary incontinence in elderly women, and to evaluate the outcome of a self-care management intervention of urinary incontinence.

Subjects and Methods

Research design

A quasi-experimental controlled research design was utilized in this study. Pre-post assessment of outcome was done in the intervention and control groups.

Setting

The study was conducted at the geriatric social club in Zagazig City.

Subjects and sample

The target population of this study was elderly women, 60 years old or above, with urinary incontinence. A convenience sample of 50 elderly women with urinary incontinence was recruited according to the following inclusion criteria: age 60 years and above, not institutionalized or bed ridden, free of diabetic and renal diseases, with the duration of urinary incontinence at least one year, a frequency of 5 times per day or more, and with precipitating factors as cough, laughing and strain. The sample was divided into two equal groups randomly, a study group for application of the intervention, and a control group.

Tools of the study

Three tools were used for data collection: an interview questionnaire form, a knowledge assessment sheet, and a voiding training record.

Interview questionnaire sheet: the first section was for collection of socio-demographic data such as age, education level, occupation, residence, marital status, family size and income. The second section was for medical history of incontinence, acute symptoms, chronic diseases, and special senses affection. The third section covered daily living activities and the extent of independence in their achievement *(Kan, 1994).* The last section dealt with the psychological impact of urinary incontinence on elderly women regarding sleep, isolation, depression, anxiety and feeling useless to family *(Kiecolt et al, 1987).*

Knowledge assessment: this tool was used to assess women knowledge regarding definition, types, causes, action taken, treatment, and helpful instructions related to urinary incontinence problem. Woman's knowledge was considered satisfactory if she could correctly answer 60% or more of the questions. Assessment was done before and after application of the intervention.

***Habit (voiding training) record*:** especially designed for elderly women *(Schnell, 1991).* The record starts at 7 AM and is completed at 7 PM for seven days. Woman has to check every 2 hours items related to wetting underwear and use of toilet. The record was filled out for one week preceding the intervention, and for another week after the intervention.

Intervention

A health education intervention for voiding training was constructed by the researchers. The goal of this habit training was to maintain bladder function by reduction of incontinent events. Management strategies were based on giving instructions for all incontinent women in the study group about Kegal exercises. The aim of these exercises is to improve voluntary and reflex contraction ability of the pelvic floor muscles. Women were trained on how to do these exercises, and were instructed to practice them at any time following the steps pointed by *Joy (1998)* and *Eberso and Hess (2003)*:

- Tighten rectal and urinary muscles as though trying to stop urinating
- Hold these muscles tight for 10-15 seconds
- Relax the muscles for 10 to 15 seconds
- Repeat relaxing and contracting the muscles for 10-25 repetitions
- At first do each of these exercises five times every day. Then, each week increase the number of times of exercises by five.

Education about the use of a voiding record diary was provided to all subjects in the intervention and control groups. They were instructed to check every two hours the number of times toilet was used for urination and the number of incontinent episodes. All incontinent women were asked to fill their voiding dairy records for a full week before health education and training exercises and bring it to be used as a baseline for each of them. This was repeated

during the last week of the six-month intervention of health education and training exercises for the study group, and without training for the control group.

Pilot study

This was conducted on 10 women with incontinence to test the feasibility and practicability of the data collection tools. These patients were not included in main study.

Field work

Before starting the practical work, formal letters were issued from the Faculty of Nursing, Zagazig University to the directors of the Geriatric social clubs included in the study. Recruitment of women in the sample was done after explanation of the purpose of the study, and after obtaining their verbal consent to participate. The individual interviewing was done to obtain personal and medical data, as well as to assess their knowledge. Then, they filled the voiding record for one week. The educational program was then offered to the study group. The program duration was six months. It was divided into twelve sessions, each 20-30 minutes, and was applied twice per week. A booklet was prepared and distributed to participants in the study group. It provided information about the definition, types, and causes of the disease, as well as self-care strategies. These included encouraging women to empty bladder completely before and after meals and at bed time, scheduling routine urination every two hours during the day, assuming a normal position for voiding (sitting position), using gravity to facilitate bladder emptying, using cotton underwear, sanitary pads, and protective pants. Women were also instructed to perform Kegel exercises at least 10 times a day. Other helpful instructions involved limiting oral fluid intake in the evening, taking diet low in sodium and saturated fats and high in vegetables, fruits and fish, and eliminating or reducing the use of coffee, tea and cola, which have a diuretic effect. They were also advised to limit the use of sleeping pills and sedatives, which decrease sensation to urinate and increase incontinence especially at night, and to make sure the toilet is nearby with a clear path and good lighting, especially at night. Evaluation of the habit (voiding) training was done by comparing the results of the one-week diary before and during the last week of the six months after implementation of the intervention. Data were collected during the period from June to December 2004.

Statistical analysis

Data entry was done using Epi-Info computer software package, while statistical analysis was done using SPSS 10.0 statistical software package. Data were presented using descriptive statistics in the form of frequencies, percentages, and means and standard deviations. Qualitative variables were compared using chi-square test. Whenever the expected values in one or more of the cells in a 2x2 tables was less than 5, Fisher exact test was used instead. Statistical significance was considered at p-value <0.05.

Results

The socio-demographic characteristics of women in the study and control groups were similar as regards marital status, education, and income (table 1). The highest percentages of the two groups were divorced or widows, 68.0% and 60.0%, respectively. More than half were educated, 56.0% in each group. Income was insufficient in a slightly higher percentage of the study group, compared to the control group, 72.0% and 56.0%, respectively, although the difference was not statistically significant. The table however shows that women in the study group had statistically significantly higher age, compared to the control, p=0.03. However, the difference was small; the means ± SD were 66.9±3.6 and 64.9+2.8 years, respectively. Similarly, the highest percentage of women in the control group was living with spouse (40.0%), whereas the highest percentage of women in the study group was living with relatives (56.0%). This difference was also statistically significant, p=0.04.

The medical history and independence in daily life activities were also quite similar in the study and control groups. Table (2) shows that hypertension was the most common disease in groups, 80.0% and 88.0%, respectively. Concerning acute symptoms, the majority of the study and control women had respiratory problems, 92.0% and 100.0%, respectively, followed by locomotors disorders, 96.0% and 84.0%, respectively. Visual disorders were present in all women in the study group (100.0%), compared to 80.0% in the control group. Conversely, they had less auditory disorders, 52.0% and 88.0%, respectively. This latter was the only statistically significant difference between the two groups. Concerning daily living activities, most of the women in the study and control groups were independent, 72.0% and 84.0%, respectively.

The study and control groups were also alike in their psychological complaints related. As table (3) shows, the majority of women were suffering from tendency to isolation, 80.0% and 88.0%, respectively, and from sadness and depression, 84.0% and 80.0%, respectively. Amnesia was found among 60.0% of the study group and 44.0% of the control group. The only difference of statistical significance was in relation of the feeling of being useless to the family, which was reported by 48.0% of the study group, compared to none (0.0%) in the control group, $p<0.01$.

Concerning women's knowledge, about urinary incontinence, table (4) points to no differences of statistical significance between the two groups. Apart from knowledge about the definition of incontinence, the percentages of women having satisfactory knowledge were very low in the study and control groups before the intervention.

After application of the intervention, table (5) demonstrates statistically significant differences in women's knowledge about urinary incontinence in all areas of knowledge, except for the definition, which was already high before the intervention in both groups. The knowledge was satisfactory in all areas of knowledge among all women in the study group (100.0%), except for knowledge about the types, which was satisfactory among 76.0% of them.

Concerning the frequency of wetting underwear among women in the study and control groups according to the seven-day diary before the intervention, figure (1) demonstrates no differences between the two groups, and their means were overlapping. After the intervention, the frequencies were markedly lower in the study group, especially after the third day, where the means were all below 3 times, compared to more than 4 times in the control group.

Similarly, figure (2) illustrates a significant increase in the frequency of using WC among women in the study group after the intervention, ranging between 6 and 7 times. No such difference could be noticed in the control group, where the mean frequencies of use of WC were similar before and after the intervention, and were mostly between 2 and 4 times.

Discussion

Urinary incontinence is a common disorder in old age, with increasing trends. It is a symptom, not a disease *(Palmer, 1996)*. Elderly people are more susceptible to urinary incontinence, compared to young, probably because many changes may occur in the lower urinary tract due to aging *(Matteson et al, 2004)*. This study was conducted to evaluate the effectiveness of an intervention on urinary incontinence management for elderly women attending geriatric social club.

The psychological effects of urinary incontinence were explored in the present study. It was found that the majority of incontinent women had symptoms of depression and isolation. These results are in agreement with *El Sayied (2001)* who has similarly found that the majority of incontinent women had symptoms of depression and isolation. Also, in a study done by *Nagib (1997)*, it has been revealed that patients were exposed to different types of psychological problems such as irritability, anxiety, and isolation related to their incontinence.

On the same line, *Ouslander et al (2005)* have reported that urinary incontinence in the elderly women is a significant health problem fraught with isolation, depression, and an increased risk of institutionalization and medical complications. Furthermore, and in accordance with the present study findings, *Harris (1996)* has reported that urinary incontinence had a negative effect on social activities and interaction with proportions ranging from 12% to 80% of the sample.

As regards women's knowledge about urinary incontinence, the present study has revealed that the majority of the patients did not know the types, causes, and action to be taken in urinary incontinence. These findings agree with those of the study done by *El Sayied (2001)* who have stated that the knowledge and awareness about the problem is a key factor in its management. In a study carried out by *Haslam (2004)*, it was found that public knowledge and beliefs about urinary incontinence in old age was a potentially significant contributor to the success or lack of success of intervention strategies. A total of 60% of incontinent people in their study did not report urinary incontinence to their physicians.

Women's knowledge has shown statistically significant improvement in the post intervention test in the study group, but not in the control group. This points to success of the health education intervention in improving their knowledge, which would consequently have a positive impact on their voiding habits for management of the problem. Similar results have been reported by previous investigators *(Abd Allah, 2001; El Sayied, 2001)*. In this perspective, the *WHO (2004)* has emphasized the importance of formal process of education in carrying enormous advantages to the health and life of incontinence patients, and consequently social and psychological advantages to society. In support to this concept, *Contreras (2004)* has stressed that those patients who have more knowledge about incontinence manage their condition better than those without knowledge.

Also, in consistence with the present study approach, *Bradway (2004)* has mentioned that education of individuals with incontinence should involve specialized multidisciplinary team approach. However, many institutions must rely on staff nurse to conduct initial and continuity urinary incontinence education. This is largely dependent on adequate knowledge by health care professionals. Therefore, *Haslam (2004)* has stressed that the nurse should complete a health history before making an informed decision with the older women about most appropriate treatment plan. There can be improved quality of life for women with incontinence if health care providers focus on this problem.

Concerning the effect of self-care intervention, the habit (voiding) training, the present study has shown marked improvement in the mean frequencies of wetting underwear and using WC among incontinent women in the study group after implementation of the intervention, using the changes of seven-day diary. No such improvement could be revealed in the control group. This result is in congruence with *Nagib (1997)* who has explained that training increases the function capacity of the urinary bladder, increases dry bed per week of incontinent patients, and consequently leads to improvement and control of nocturnal incontinence.

Pelvic floor muscle training (Kegel exercises) is the most commonly recommended physical therapy treatment for women with stress leakage of urine. It is also, used in the treatment of women with mixed incontinence, and less commonly for urge incontinence *(Hay et al, 2004)*. The success of Kegel exercises included in the present study intervention for control of urinary incontinence is in agreement with *Mattesoh et al (2004)* who have shown statistically significant improvement among incontinent patients after practicing such exercises. This is also in accordance with *Dattilo (2001)* who demonstrated that in women with various degree of pelvic relaxation, the power of pelvic floor muscles contraction will improve their symptoms. The success rate of exercise therapy was more than 80%. On the same line, *Horrocks et al (2004)* have mentioned that the pelvic floor muscle exercise rehabilitation is effective in improving stress and urge incontinence in community dwelling women with incontinence This

effect is durable for a long period, and the majority of women continue to practice pelvic muscle exercises one or more times per week. Similar results were reported by other investigators who have advocated that Kegel exercises improve the tone of pelvic floor muscles and can restore muscle tone in approximately six weeks *(Arelen and Polaskin, 1996; Johnson and Ivan, 2002; Sampelle, 2003).*

Conclusion

Study of incontinent women attending the geriatric social club in Zagazig city has shown a lack of knowledge about the condition. Implementation of a health education intervention proved an effective self-care practice for management of the problem. The study group has shown significant improvement in their knowledge, number of times wetting underwear, and numbers of times using WC after the intervention. These changes were not shown among women in the control group.

Recommendations

According to the study results the following recommendations could be drawn:

- Periodic screening of elderly is required for early detection and management of urinary incontinence.
- Nurses (either community or psychiatric) needed to be trained in more specialized aspect of care of incontinence elderly including health education intervention about how to mange incontinence.
- Health education for elderly are needed about self care management of incontinence, mass media could provide both the public and patient social support to the elderly by accurate information about management of incontinence..

Table (1): Socio-demographic characteristics of elderly women in the intervention and control groups

	Group				X^2 test	p-value
	Intervention (n=25)		Control (n=25)			
	No.	%	No.	%		
Age (years):						
<65	21	84.0	14	56.0		
65+	4	16.0	11	44.0	4.67	
Mean ± SD	66.9±3.6		64.9±2.8		2.18	0.03*
Marital status:						
Married	8	32.0	10	40.0		
Divorced/widow	17	68.0	15	60.0	0.35	0.56
Education:						
Uneducated	11	44.0	11	44.0		
Educated	14	56.0	14	56.0	0.00	1.00
Income:						
Sufficient	7	28.0	11	44.0		
Insufficient	18	72.0	14	56.0	1.39	0.24
Living with:						
Spouse	8	32.0	10	40.0		
Son/daughter	3	12.0	9	36.0	6.42	0.04*
Relatives/other	14	56.0	6	24.0		

(*) Statistically significant at p<0.05

Table (2): Medical history and dependence among elderly women in intervention and control groups

	Group				X^2 test	p-value
	Intervention (n=25)		Control (n=25)			
	No.	%	No.	%		
Chronic diseases:						
Hypertension	20	80.0	22	88.0	Fisher	0.70
Cardiovascular diseases	2	8.0	4	16.0	Fisher	0.67
Gastrointestinal diseases	0	0.0	1	4.0	Fisher	1.00
Acute symptoms:						
Gastrointestinal	18	72.0	14	56.0	1.39	0.24
Cardiovascular	21	84.0	20	80.0	Fisher	1.00
Urinary	15	60.0	11	44.0	1.28	0.26
Respiratory	23	92.0	25	100.0	Fisher	0.49
Locomotor	24	96.0	21	84.0	Fisher	0.35
Special senses:						
Visual disorders	25	100.0	20	80.0	Fisher	0.051
Auditory disorders	13	52.0	22	88.0	7.71	0.005*
Teeth problems	23	92.0	25	100.0	Fisher	0.49
Total number of health problems:						
5-7	12	48.0	11	44.0		
8-9	13	52.0	14	56.0	0.08	0.78
Dependence in daily life activities:						
Independent	18	72.0	21	84.0		
Dependent	7	28.0	4	16.0	1.05	0.31

(*) Statistically significant at $p<0.05$

Table (3): Psychological impact of urinary incontinence on elderly women among intervention and control groups

Psychological status	Group				X^2 test	p-value
	Target (n=25)		Control (n=25)			
	No.	%	No.	%		
Tendency isolation	20	80.0	22	88.0	Fisher	0.70
Anxiety/fear	4	16.0	1	4.0	Fisher	0.35
Sadness/depression	21	84.0	20	80.0	Fisher	1.00
Feeling useless to family	12	48.0	0	0.0	15.79	<0.001*
Sleep	15	60.0	11	44.0	1.28	0.26

(*) Statistically significant at p<0.05

Table (4): Satisfactory knowledge about urinary incontinence among elderly women in the intervention and control groups before the intervention

Satisfactory knowledge about urinary incontinence:	Group				X^2 test	p-value
	Intervention (n=25)		Control (n=25)			
	No.	%	No.	%		
Definition	19	76.0	20	80.0	0.12	0.73
Types	0	0.0	0	0.0	0.00	1.00
Causes	3	12.0	7	28.0	2.00	0.16
Action to be taken	2	8.0	2	8.0	Fisher	1.00
Treatment	3	12.0	0	0.0	Fisher	0.23
Helpful instructions	5	20.0	11	44.0	3.31	0.07
Total knowledge	9	36.0	9	36.0	0.00	1.00

Table (5): Satisfactory knowledge about urinary incontinence among elderly women in the intervention and control groups after the intervention

Satisfactory knowledge about urinary incontinence:	Satisfactory knowledge				X^2 test	p-value
	Intervention (n=25)		Control (n=25)			
	No.	%	No.	%		
Definition	25	100.0	22	88.0	Fisher	0.23
Types	19	76.0	0	0.0	30.65	<0.001*
Causes	25	100.0	9	36.0	23.53	<0.001*
Action to be taken	25	100.0	2	8.0	42.59	<0.001*
Treatment	25	100.0	0	0.0	50.00	<0.001*
Helpful instructions	25	100.0	12	48.0	17.57	<0.001*
Total knowledge	25	100.0	14	56.0	14.10	<0.001*

(*) Statistically significant at $p<0.05$

Figure (1): Seven-day diary of times of wetting underwear among elderly women

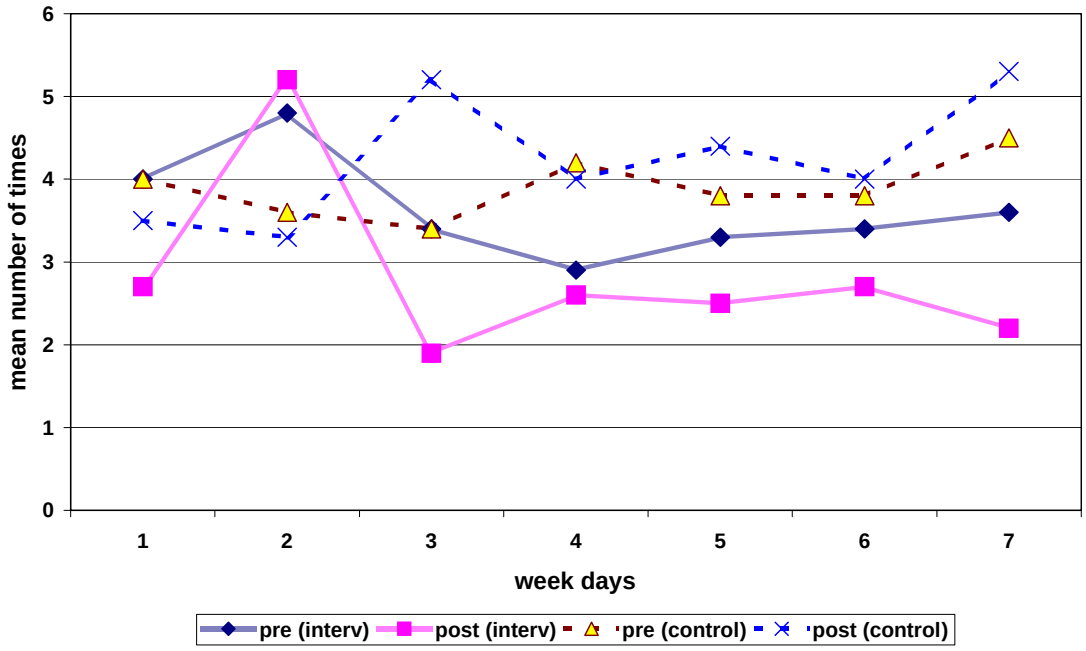
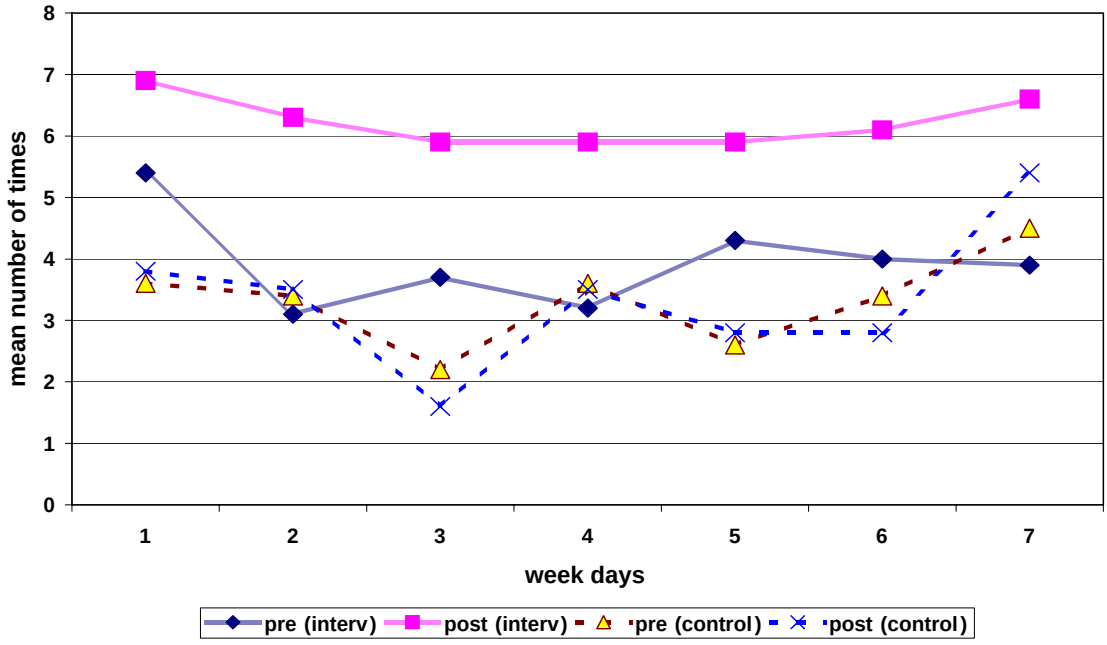


Figure (2): Seven-day diary of times of using WC among elderly women in the intervention and control groups before and after the



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الملخص العربي

تأثير البرنامج الصحي التعليمي فى السيطرة على سلس البول اللإرادى بين السيدات المسكنات بمدينة الزقازيق

إن السلس البولى مشكلة صحية خطيرة بين السيدات المسنات لهـا تأثيرهـا الجـسدى و النفـسى و الإجتمـاعى. وتعتبرالعناية الشخصية هى الوسيلة الوحيدة التى من خلالها يستطيع المريض أن يتعايش مع المشكلة.

هدف الدراسة:
هو تقيم المعلومات والمشاكل الجسدية والنفسية في السيدات المسنات المصابات بسلس البول وكـذلك لتقـيم تـأثير البرنامج الصحى التعليمى على السيدات المريضات

طرق البحث:
تمت الدراسة فى النادى الإجتماعى للمسنين بمدينة الزقازيق مستخدمين طريقة الكوازى(تصميم شبه تجريبى) قبل و بعد التقيم. ولقد اشتملت التجربة على 50 سيدة فوق الستين عاما من العمرمصابات بمرض السلس البولى لمدة عـام على الأقل. ولقد قسمت المريضات إلى مجموعتين متساويتان فى العدد؛ المجموعة الأولى أجرى عليهـا البرنـامج (العناية التجريبية) و الأخرى أعتبرت مجموعة ضابطة (لم يطبق عليها البرنامج). وقد اسـتخدمت ثـلاث طـرق لاستكمال البحث وهى: أسئلة اثناء المقابلة الشخصية- قائمة تقيم المعلومات عن المرض- سجل التبول الـلإرادى. ولقد تم إعطاء البرنامج التعليمى للمريضات فى مجموعات خلال ستة أشهر. من يونيو إلى ديسمبر 2004

النتائج:
أظهرت النتائج أن التاريخ الطبى و الإستقلالية فى أنشطة الحياة اليومية و المعانـاة النفـسية كانـت متـشابه فـى المجموعتين. ولم يكن هناك أي اختلاف ذو دلالة إحصائية فى المعلومات عن المرض بين المجموعتين قبل البرنامج التعليمىولقد لوحظ أن المعلومات عن المرض قليلة عند المجموعتين. ولقد لوحظ أن هنـاك تحـسن ملحـوظ فـى معلومات المجموعة التى طبق عليها البرنامج التعليمى. من حيث نسبة بلل الملابس الداخلية قبل البرنامج التعليمى لم يكن هناك أية فوارق بين المجموعتين. ولكن بعد البرنامج التعليمى لوحظ انخفاض معدل البلل خاصـة بعـد اليـوم الثالث من البرنامج التعليمى مع إزدياد استعمال دورة المياة فى المجموعة الثانية.

خلاصة البحث:
لوحظ أن هناك نقصا شديدا فى المعلومات الصحية بين السيدات المسنات عن المرض. وقد لوحظ،أن تأثير البرنامج التعليمى الصحى مهم جدا فى العناية بالمرضى.

التوصيات:
الكشف الطبى المستمر على المسنين لتشخيص السلس البولى مبكرا ومحاولة التعامل معه.
إن الممرضات سواء ممرضة الصحة العامة وكذلك ممرضة الصحة النفسية يحتاجون للتعلم و التدريب فى مراكـز متخصصة فى مرض السلس البولي.
أن المريضات المسنات فى إحتياج شديد للتثقيف الصحى عن المرض. ويجب أن يكون هناك دور لوسائل الإعـلام المختلفة فى زيادة الوعى لدى المسنات والمجتمع و كيفية التعامل مع المشكلة.

CONFLICT AMONG STAFF NURSES AND RESOLUTION TECHNIQUE USED BY THEIR HEAD NURSES

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Abstract

Conflict is a natural, inevitable condition in organization, and it is often a prerequisite for change in people and organization (Sullivan and Decker, 1997). The conflict when managed properly, can promote organizational creativity, productivity, cost containment and can lead to satisfaction by all involved parties (Dove ,1998).The present study was done to investigate the level and type of conflict among staff nurses as perceived by themselves and by their nurse leaders, identifying the different strategies utilized by nurse leaders to manage staff nurses conflict and solicit staff nurses opinion regarding their preferred style of conflict resolution. Data were collected from Zagazig University Hospital . Sample of study consisted of 267 staff nurses and 81 head nurses. The data for this study were collected using two types of questionnaire sheets, one for the staff nurses group and other for the head nurses group. The finding of the study have indicated that intergroup was the most frequent type of nurses conflict followed by interpersonal, while the intrapersonal was the least frequent type . Head and staff nurses in the different units were utilizing and preferred the collaborating, compromising and accommodating conflict resolving strategies rather than competing and avoiding ones. The majority of both groups have agreed upon shortage of resources as the important factor. Recommendations are made in the light of these finding.

Introduction:

Healthcare organizations are facing major changes. These changes are likely to increase conflict, which may affect patient care *(Eason and Brown, 1999; Cox, 2001)*. Conflict is common in all aspect of life and all organizations due to the complexity of organizational relationships, the interactions among the members of the organization, and their dependence on one another *(Marquis and Huston, 1998)*. It is common occurrence in both everyday personal and professional nursing life *(Cavanagh, 1991)*.

Conflict is defined as a clash, struggle that occurs when a real or perceived threat or difference exists in the desires, thoughts, attitudes, feelings or behaviors of two or more parties *(Huber, 2000)*. Its outcome may be constructive, destructive, or neutral *(Marquis and Huston, 1998)*.

Organizational conflict can reflect interpersonal, intrapersonal, and intergroup conflicts. Such conflicts can be developed between groups on the same horizontal level or between groups on different power and status in the organizational hierarchy *(Marquis and Huston, 1998; Tomey, 2000)*. Interpersonal conflicts are those that arise between individuals. They can create

energy to build important relationship and teams if treated with best way *(Wise, 1995; Bernhard and Walsh, 1995)*.

Nurse executives operating in healthcare systems today must have an understanding of conflicts of interest in order to promptly identify actual as well as potential conflicts. It is imperative that strategies be set in place to prevent or handle conflicts of interest, as they occur, in order to build trusting relationships with patients, suppliers, and communities *(Willers, 2004)*. Handling conflict is one of the most important, stressful and time consuming tasks faced by leaders *(Sotile and Sotile, 1999)*. It is perhaps one of the most difficult tasks a manager has to deal with. Moreover, the manager should recognize the problem, identify who the parties are, and think objectively about the best way to resolve it *(Mackenize and Buchan, 1998)*.

According to *Valentine (2001)*, *Thomas and Kilmann (1977)* have identified five basic conflict management styles for measuring five conflict handling strategies. These are namely avoiding, compromising, collaborating, competing, and accommodating,. The appropriate style depends on many variables such as the situation itself, the time urgency needed to make the decision, the power, and the maturity of the individual involved in the conflict *(Marquis and Huston, 2000)*.

Conflict can push organizations to higher levels of achievement and quality or it can suppress growth and foster frustration (Dave, 1998). Conflict management skills can enhance all aspects of life (Anderw, 1999). It is rated as of equal or slightly higher importance than planning, communication, motivation and decision-making (Richard, 1996). So, hospitals hope to reduce the cost of conflicts and release its benefits (Skjorshammer, 2001). Therefore, conflict should be looked at as finding solution for the further instead of being looked at as an obstacle (Vicki, 2001).

Aim of the study

The aim of this study was to determine conflict management styles utilized by head nurses working in nursing units at Zagazig university hospitals through:

- Assessing the level and type of conflict among staff nurses as perceived by themselves and by their nurse leaders
- Identifying the different strategies utilized by nurse leaders to manage staff nurses' conflict Soliciting staff nurses opinions regarding their preferred style of conflict resolution

Subjects and Methods

Research design

A cross-sectional analytic research design was used in carrying out the study.

Setting

The study was conducted in the medical, surgical, emergency, and critical care nursing units in Zagazig university hospitals. These included pediatrics and medical university hospital, and the emergency university hospital. The pediatric and medical university hospital provides healthcare in nearly all medical and pediatric specialties. It includes intensive care units, coronary care units, and dialysis units. Its total bed capacity is 300 beds. The emergency university hospital provides different emergency services and its specialties namely; neurosurgery, orthopedics, anesthetic care, operating rooms, chest and heart, obstetric unit, and finally the reception. Its total bed capacity is 246 beds.

Subjects

A convenience sample of (348), were selected from the study settings, divided into two groups, first were staff nurses included (256), they had diploma degree and (11), a technical

institute degree. They were all fulfilling the inclusion criterion of working at least 6 months in the study setting.

Second group included (81), head nurses, consisted of all the available head nurses who were working in the previously mentioned hospitals during the period of data collection, with a minimum of one-year experience in a managerial position. All head nurses had a bachelor degree in nursing.

Tools for data collection

The data for this study were collected using two types of questionnaire sheets, one for the staff nurses group and other for the head nurses group.

- **Head nurses questionnaire:**

This questionnaire was self-administered. It was based on previous literature *(Ibrahim,1990; Wise, 1995; Mohamed, 2000)*. It consisted of three parts:

Part I: intended to collect data related to demographic characteristics of head nurses group such as age, marital status, qualification, and experience.

Part II: intended to assess the causes of nurses' conflict. It was developed by *Ibrahim (1990)* and modified by the researcher after reviewing related literature. It included 62 items representing 11 categories of causes of nurses' conflicts. These were as follows: administrative system, reward system, nature of nursing care environment , leadership behavior , shortage of resourses , ……

Part III: a self-assessment questionnaire sheet to assess head nurses' opinions in the patterns of conflict resolution they utilized. It was developed by *Wise (1995)* and *Mohamed (2000)*. It included 38 items divided into five basic styles identified by *Thomas and Kilman (1977)*. These were as: collaborating , accommodating , avoiding , competing , and compromising.

Responses were measured on a five-point Likert scale ranging from never to always.

- **Staff nurses questionnaire** :

This questionnaire was similar to that of head nurses. However, the statements were re-phrased to ask staff nurse about her preference of the conflict resolving strategy to be used by her supervisor.

Methods:-

Tools of data collection were translated into Arabic and reviewed for their content validity by ten experts.

Pilot study:

This was carried out to test the feasibility and the time needed to fill out the questionnaire sheets. The pilot study was conducted on 10 staff nurses and 10 head nurses from different units in Zagazig university hospitals. These were not included in the actual study. Time was given with explanation to respond to the items. Modification and omission were done according to the results of pilot study. The time needed for filling the questionnaire sheets ranged from 20 to 30 minutes for nurses and head nurses. Data collection was carried out from June 2004 to July 2004. Before distributing the questionnaire, the researcher met with the subjects and explained the purpose of the study and the components of the tools, as well as the method of filling it. Subjects of the study were reassured that the information obtained would be confidential while distributing the questionnaire sheets.

Scoring system:

For the conflict questionnaire, the responses from "always" to "never" were scored respectively from 5 to 1. The items were categorized into 3 groups, namely interpersonal, intrapersonal, and intergroup. The scores of the statements were summed-up in each group and the total divided by the number of the items, giving a mean score for perception of type of conflict. The resulting mean score was converted into a percentage score. The total score represented total conflict. For each category, and for the total score, conflict was considered to be present if the score was 60% or more of the total, and absent if less.

For the conflict resolving strategies questionnaire, the responses from "always" to "never" were scored respectively from 5 to 1. The items were categorized into 5 groups, namely collaborating, compromising, accommodating, competing, and avoiding. The scores of the statements were summed-up in each group and the total divided by the number of the items, giving a mean score for perception of type of conflict. The resulting mean score was converted into a percentage score. For each category, conflict resolving strategy was considered to be used (for head nurses) or preferred (for staff nurses) if the score was 60% or more of the total, and not if less.

Data analysis:

Data were presented using descriptive statistics in the form of frequencies and percentages for qualitative variables, and means and standard deviations for quantitative varia**bles. Quantitative** variables were compared using Student t-test. Qualitative variables were compared using chi-square test. Whenever the expected values in one or more of the cells in a 2x2 tables was less than 5, Fisher exact test was used instead. In larger than 2x2 cross-tables, no test could be applied whenever the expected value in 10% or more of the cells was less than 5. Statistical significance was considered at p-value <0.05.

Result s of the study:

Table (1) shows the sample distribution according to nursing categories. It indicates that about two thirds of the head nurses' sample were from the emergency hospital (65.4%), compared to about one half of the staff nurses' sample (48.7%). The highest percentage of head nurses were from the emergency department (46.9%), whereas the highest percentage of staff nurses was from the critical care department (41.6%).

The socio-demographic characteristics of head nurses and staff nurses are described in **table (2)** They had a similar age distribution, with almost equal means, 29.4±3.3 SD years and 29.3±5.6 SD years, respectively. The highest percentages were married, respectively 60.5% and 75.7%. They mostly had 1 to 2 children.

The types and levels of conflicts as perceived by head nurses and staff nurses are compared in **table (3)** Statistically significant differences were revealed between the two groups in their perception of interpersonal and intergroup conflicts, $p<0.001$. In both, the level of perception was higher among staff nurses. Similarly, the perception of total conflict was statistically significantly higher among staff nurses (32.6%), compared to head nurses (13.6%), $p<0.001$.

Table (4) describes the factors associated with conflicts as perceived by staff nurses and head nurses. Statistically significant differences were demonstrated in many of these factors. These were in factors related to managerial conduct of superior, leadership behavior of superior, multiplicity of nurse's roles, opportunities for self-actualization, reward system, non-nursing function load, and nurses' differences and value system. More staff nurses perceived all these factors than did head nurses. Meanwhile, the majority of both groups have agreed upon shortage of resources as the most important factor.

The conflict resolving strategies utilized by head nurses and preferred by staff nurses are compared in **table (5)** Statistically significant differences were revealed between the two groups. The accommodating strategy was more utilized by head nurses (38.3%) than preferred by staff nurses (20.2%), $p<0.001$. Conversely, the collaborative and compromising strategies were more preferred by staff nurses than utilized by head nurses.Meanwhile, the collaborative strategy was utilized by the majority of head nurses (88.9%), and also preferred by the majority of staff nurses (95.9%). The relation between utilization of collaborating strategy for resolving conflicts by nurse leaders and their socio-demographic characteristics is presented in table (6) The table indicates no statistically significant associations between any of their personal characteristics and the utilization of this conflict resolving strategy.

Table (7) describes the relation between preference of collaborating strategy for resolving conflicts by staff nurse and their socio-demographic characteristics. Statistically significant associations were revealed between their work hospital and their nursing experience years, from one side, and the preference of this conflict resolving strategy, from the other side. The figures in the table indicate that more nurses in the emergency hospital (81.8%) did not prefer the collaborating strategy, compared to the medicine/pediatrics hospital, $p=0.02$. Conversely, the nurses with experience of five years or more (93.0%) preferred more this strategy, compared to those with less years of experience, $p<0.05$The relation between utilization of compromising strategy for resolving conflicts by head nurses and their socio-demographic characteristics is described in table (8) As the table indicates, a statistically significant association was revealed between the work hospital and the utilization of this conflict resolving strategy, $p=0.02$. More nurse leaders in the emergency hospital (78.0%) do not utilize the compromising strategy.

Table (9) illustrates the relation between preference of compromising strategy for resolving conflicts by staff nurse and their socio-demographic characteristics. No statistically significant associations could be detected between any of their socio-demographic and work characteristics and the preference of this conflict resolving strategy.

In **table (10)** the association between the perception of conflicts by head nurses and the different strategies they are utilizing for resolving conflicts is displayed. It is evident that no relation of statistical significance was present between these variables.

Table (11) similarly shows no association of statistical significance between the perception of conflicts by staff nurse and the different strategies they preferred for resolving conflicts.

Discussion:

Different changes and challenges are facing nurse leaders and they need to implement an effective leadership style in a complex healthcare environment *(Jooste, 2004)*. Conflict is recognized as being a common occurrence in both everyday personal and professional nursing life, and it is now generally agreed that conflict can be both problematic and potentially beneficial to both individuals and organizations *(Cavanagh, 1991)*.

Healthcare institutions include many interacting groups; these interactions frequently lead to conflicts. Nurses encounter different levels of organizational conflicts; intra-personal, interpersonal and inter-group conflicts. In the present study, the perception of total conflict was statistically significantly higher among staff nurses, compared to head nurses. This could be attributed to the higher managerial skills of the nurse leaders, compared to those of the staff nurses. Also, staff nurses work conditions might give them more frustrations due to shortage of resources and administrative problems that might increase the opportunities for conflict. The lack of managerial experience and its association with conflict has been highlighted by *Barker*

(1995) who has stressed that training and nurse managers' modeling of effective resolution techniques are key elements in developing improved conflict resolution skills among staff nurses.

In the present study, intergroup conflicts were perceived by higher percentages of both studied groups than intra- and inter-personal conflicts. They were perceived by more than three fourths of the studied staff nurses, while they were only perceived by about one fourth of the studied nurse leaders. These findings are in disagreement with *(El Berry, 2003)*, who has reported that intrapersonal conflict was higher, compared to the other types of conflict in a study carried out in Ain-Shams University and El-Demerdash hospitals. However, in agreement with the present study findings, this author has found that the intergroup conflict was higher than the interpersonal one. The difference between the findings of the two studies could be explained by the differences between the two settings, with differences in regulations, work environment, as well as nurses' social background. In fact, cultural diversity issues have been claimed to affect the healthcare workplace and nursing practice *(Lowenstein and Glanville, 1995)*.

Meanwhile, the higher level of intergroup conflict reflects the ability of team work within units, and the problems of communication and work relations among different units and departments competing for the scarce resources, as well as the conflicting roles and responsibilities. In support for this, *LeTourneau (2004)* reported that changes in the roles of physicians and nurses have resulted in interdisciplinary tension and conflict between these professionals. Moreover, *Sider and Aschenbrener (1999)* have emphasized that complex interpersonal conflicts are inevitable in the high speed, high stakes, and pressured work of healthcare.

As regards the factors related to conflicts, as perceived by studied groups in the present study, the majority of both groups agreed upon the shortage of resources. This findings has been signaled in many research studies as a source of conflict in a time of declining resources and increased expectations *(Littlefield, 1995; Warkoczeski and Hornsby 2002)*. The solution suggested by *Outhwaite (2003)* was the development of an integrated team, as well as fostering development of collaboration, team-work and inter-professional practice *(Fitzgerald and Teal, 2003)*.

Moreover, among the studied head nurses, high percentages have agreed upon opportunities for self-actualization and multiplicity of nurse's roles, as factors for conflicts among the staff nurses. In agreement with these findings, *(El Berry, 2003)* has also found that the opportunity of self-actualization was the most frequently perceived factor causing conflict among nurses. However, in contradiction with the present study findings, the reward system came second, rather than the multiplicity of nurses' role. This, again, might be explained in the context of different study settings, where role ambiguity might be a more important problem in the present study setting.

On the other hand, the results of *(El Berry, 2003)* are in total agreement with the present study findings related to staff nurses, who have perceived opportunities for self-actualization, lack of reward system, and multiplicity of nurse's roles as factors related to the presence of job conflicts. Moreover, about two thirds of the studied staff nurses perceived nurses' differences and value system and non-nursing function load as factors related to conflicts. These findings are supported by the chaos and complexity theories that explains the factors related to conflicts in nursing practice *(Walsh, 2000)*.

In the present study, leadership behavior of superior, personal status differences was perceived as a factor related to the presence of conflicts by about two thirds of the studied staff nurses group, while that factor was perceived by only a minority of the studied nurse leaders group. This is quite plausible, since leadership behavior is the key to either creating conflict or resolving it. An empowering leader who cares about subordinates, and who is fair in work distribution and in rewarding would certainly have fewer problems with conflict among her / his staff.

In agreement with this, *Callister and Wall (2001)* have identified three factors that influence conflict, namely organizational power, personal status differences of the individuals handling the conflict, and their previous interactions. These factors affected the individuals' behavioral responses or emotions, specifically anger.

The conflict resolving strategies utilized by head nurses and preferred by staff nurses were analyzed in the present study. Conflict management is a major component of a nurse manager's role. How conflict is defined and subsequently approached can determine whether its outcome is a positive, growth-enhancing experience, or, if instead, it will have lingering negative effects destined to resurface, provoking further conflict. When conflict progresses without effective intervention, others are drawn, or triangled in, and it becomes difficult to determine how, why, and with whom the conflict began. Approaches range from total avoidance to a fully invested, collaborative process of resolution. The collaborative response demands significant management involvement; however, its outcome can be the discovery of new and better practice opportunities, benefiting all involved *(Porter, 1996)*.

The results of the present study indicated that the collaborative strategy was utilized by the majority ofhead nurses, and also preferred by the majority of staff nurses. The results are in accordance with that of the study done among head nurses in El-Chatby Pediatric and Obstetric and Gynecology hospitals, Alexandria, *(Mohamed, 2000)* where most of the studied head nurses preferred the collaborative strategy for conflict resolution. Similarly, *(El Berry, 2003)*, in the study at Ain-Shams University and El-Demerdash hospitals, has reported that the collaborative strategy was the mostly used in resolving conflict. These findings are explained by the fact that university hospitals, as in the three studies including the present one, offer head nurses excellent opportunities to increase their management skills in problem-solving and decision-making through in-service education programs. However, although collaboration and win/win strategies are ideal, but not always possible.

Collaborative conflict resolution is characterized by an approach in which people attack problems rather than each other. Essential components of collaborative conflict resolution include selection of basic technique, preparation for confrontation, and viewing the situation from the other person's perspective *(Umiker, 1997; Key, 2000)*.

In the same vein, and in support to the present study, *Hite (1977)* has early emphasized that collaboration will be the first choice for nurses at the coming era because they are seeking expanded roles, requesting more responsibilities and authority, desiring and seeking more education, wanting a larger voice in the decision-making process for professional achievement. Furthermore, *Johnson (1994)* has mentioned that collaboration is the best style to resolve conflict in order to achieve long-term benefits, and is considered a fully assertive and cooperative problem-solving approach. It has a positive impact on the individual, the group, the organization, and the consumer. It tends to be a characteristic of more successful managers, higher performing organization, and positive feelings of self and others *(Longest, 1990)*. However, organization values should support collaboration through participation, support systems, autonomy, freedom and equality, freedom of expression, and interdependence *(Henneman et al, 1995)*.

In another aspect of collaborative strategy, the present study data showed statistically significant associations between staff nurses' work hospital and the preference of collaborative conflict resolving strategy. More staff nurses in the emergency hospital did not prefer the collaborating strategy, compared to those in the medical one. This might be explained by the different nature of work and consequently the different sources of conflict. On the contrary, *Allered (1995)* have reported that there is no relationship between the type of unit and coping strategies or conflict resolution style.

As regards years of experience, the result of the present study has demonstrated that majority of nurses with experience of five years or more preferred more the collaborative

strategy for resolving conflicts. The finding is consistent with a number of previous studies that have concluded that the more experience nurses had, the more ability and preferences to judge the situation and solve it appropriately *(Hamdy et al, 1987; Hermina et al, 2000; El Berry, 2003)*. Nevertheless, head nurses who adopt those styles must be mature enough, having a wide range of experience to negotiate conflict issues, to make decisions, and to solve problems in assertive, cooperative manner *(Thomas, 1992)*.

Alternative approaches to confront destructive conflict are also essential. The present study findings revealed that compromising management strategy was the second one preferred by both the studied groups. A nurse who functions adequately, balances between the necessity to get the job done while maintaining morale at a satisfactory level, maintains status quo, and in conflict uses compromise style (Douglass, 1992). This means that the studied nurses in the present study might prefer to function adequately by using the compromise style in conflict resolution. The finding is in agreement with (El Berry, 2003), who has similarly found that compromising was the second ranking choice of the conflict resolving strategies.

The results of the present study reflect nurses' maturity, insight, and awareness. They preferred to use the most cooperative conflict resolution styles (collaboration, compromising and accommodation) rather than the dominant styles (competing and avoidance). These points to their awareness of the current managerial philosophies, and wishing to build social credits for later use as suggested by many researchers (Blake and Mauten, 1982; Thomas, 1992). This result could be attributed to the nature of the relationship between head nurses, physicians, and other healthcare providers, which becomes more collegial, and collaborative (Douglass, 1992).

These data are incongruent with the findings of Cavanagh' (1991) study. This author presented a review of some aspects of conflict and its management, and specifically investigated the conflict management style of staff nurses and nurse managers in the hospital setting. The results suggested that avoidance is the most commonly used conflict management strategy, with competition being the least favored.

Also, in disagreement with the present study finding regarding the non-use of avoidance Skjorshammer (2001) presented a case study of a Norwegian hospital, analyzing how health professionals manage conflicts related to work co-operation. The author reported that when in conflict, health professionals seem to use three major approaches to handling the situation: avoidance, forcing and negotiation, and usually in that order. Avoidance behavior or suppression is the most common reaction to an emerging conflict. If the use of power does not re-establish a balance between the participants, one negotiates.

Surprisingly, the present study findings did not show statistically significant associations between nurses' age and qualification and their preference of management strategy for conflict resolution. These findings could be attributed to the diverse situations and problems the nurses face in their work, which demand the utilization of different management styles according to the situations.

In support of this explanation, *Swansburg and Swansburg (1999)* has reported that age has no effect on nurses' willingness to assume and accept responsibility, and to be held accountable for change, and did not affect their problem-solving approach. Moreover, *El Berry, (2003)* has claimed that a collaborative style depends on the readiness of the individual to engage in this type of interpersonal process, which is not correlated with the educational level. On the other hand, *Gordon (1995)* pointed out that education and experience form a basis of great maturity, interpersonal relationships, skills of decision-making, and problem-solving.

Conclusion and Recommendations:

In conclusion, the findings of the study have indicated that intergroup was the most frequent type of nurses' conflict followed by interpersonal, while the intrapersonal was the least frequent type. The factors associated with conflicts, as perceived by staff nurses and nurse

leaders, were related to managerial conduct of superior, leadership behavior of superior, multiplicity of nurse's roles, opportunities for self-actualization, reward system, non-nursing function load, and nurses' differences and value system. More staff nurses perceived all these factors than did nurse leaders. The majority of both groups have agreed upon shortage of resources as the most important factor. Head and staff nurses in the different units were utilizing and preferred the collaborating, compromising, and accommodating conflict resolving strategies rather than the competing and avoiding ones. No statistically significant difference were found in using these styles in relation to type of units, age, qualification, marital status, and number of children for both groups except for years of nursing experience and the type of hospital.

Recommendations

Based upon the findings of the study the following recommendations were proposed. Conflict and its management strategies adopted by nurse leaders, using different instruments

- Attention should be paid to conflict through in-service education programs
- Nurses' participation in decision-making should be encouraged, using motivation aspects and reward system in active way to increase self-confidence
- Multi-center studies are needed to evaluate nurses' skills of conflict resolution, assess administrative interventions to manage organizational conflict, assess the dynamics of the hospitals and work environment of nurses to identify the contributing factors of nurses' behavior, and to identify subordinates' perception of conflict resolution strategies as utilized by their head nurses.

Table (1): Distribution of the sample of nurse leaders and staff nurses according to workplace

	Nursing category			
	Head nurses (n=81)		Staff nurses (n=267)	
	No.	%	No.	%
Hospital:				
Medicine/pediatrics	28	34.6	137	51.3
Emergency	53	65.4	130	48.7
Department type:				
Critical care	23	28.4	111	41.6
Emergency	38	46.9	86	32.2
Medical	2	2.5	25	9.4
Surgical	18	22.2	45	16.9

Table (2): Socio-demographic characteristics of head nurses and staff nurses in the study sample

	Nursing category			
	Head nurses (n=81)		Staff nurses (n=267)	
	No.	%	No.	%
Age (years):				
<25	2	2.5	46	17.2
25-	46	56.8	118	44.2
30+	33	40.7	103	38.6
Mean±SD	29.4±3.3		29.3±5.6	
Marital status:				
Single	32	39.5	62	23.2
Married	49	60.5	202	75.7
Divorced	0	0.0	3	1.1
Number of children:				
0	6	12.2	11	5.4
1-2	31	63.3	114	55.6
3+	12	24.5	80	39.0

Table (3): Types and level of conflict perceived by staff nurses and their head nurses

Types	Nursing category				Chi-Square Test	p-value
	Head nurses (n=81)		Staff nurses (n=267)			
	No.	%	No.	%		
Interpersonal	12	14.8	79	29.6	7.02	0.008*
Intrapersonal	11	13.6	40	15.0	0.10	0.75
Intergroup	21	25.9	205	76.8	70.59	<0.001*
Total	11	13.6	87	32.6	11.09	<0.001*

(*) Statistically significant

Table (4): Conflict resolving strategies utilized by head nurses and preferred by staff nurses

Conflict resolving strategies	Nursing category				Chi-Square Test	p-value
	Head nurses (n=81)		Staff nurses (n=267)			
	No.	%	No.	%		
Accommodating	31	38.3	54	20.2	10.96	<0.001*
Collaborative	72	88.9	256	95.9	Fisher	0.03*
Compromising	40	49.4	166	62.2	4.21	0.04*
Competing	14	17.3	51	19.1	0.14	0.71
Avoiding	0	0.0	4	1.5	Fisher	0.58

(*) Statistically significant

Table (5): Relation between collaboration conflicts resolving strategy utilized by head nurses and their socio-demographic characteristics

	Collaboration strategy				Chi-Square Test	p-value
	Used		Not used			
	No.	%	No.	%		
Hospital:						
Medicine/pediatrics	25	34.7	3	33.3		
Emergency	47	65.3	6	66.7	Fisher	1.00
Department type:						
Critical care	20	27.8	3	33.3		
Emergency	34	47.2	4	44.4	--	--
Medical	3	4.2	0	0.0		
Surgical	15	20.8	2	22.2		
Age (years):						
<25	2	2.8	0	0.0		
25-	44	61.1	2	22.2	--	--
30+	26	36.1	7	77.8		
Experience years as leader:						
<5	26	36.1	1	11.1		
5+	46	63.9	8	88.9	Fisher	0.26
Marital status:						
Single	31	43.1	1	11.1		
Married	41	56.9	8	88.9	Fisher	0.08
Number of children:						
0	4	9.8	2	25.0		
1-2	29	70.7	2	25.0	--	--
3+	8	19.5	4	50.0		

(--) Test result not valid

Table (6): Relation between collaboration conflict resolving strategy preferred by staff nurses and their socio-demographic characteristics

	Collaboration strategy				Chi-Square Test	p-value
	Preferred		Not preferred			
	No.	%	No.	%		
Hospital:						
Medicine/pediatrics	135	52.7	2	18.2		
Emergency	121	47.3	9	81.8	5.04	0.02*
Department type:						
Critical care	109	42.6	1	9.1		
Emergency	77	30.1	9	81.8	--	--
Medical	25	9.8	0	0.0		
Surgical	45	17.6	1	9.1		
Age (years):						
<25	41	16.0	5	45.5		
25-	116	45.3	2	18.2	--	--
30+	99	38.7	4	36.4		
Nursing qualification:						
Technical institute	10	3.9	1	9.1		
School diploma	246	96.1	10	90.9	Fisher	0.38
Nursing experience years:						
<5	18	7.0	3	27.3		
5+	238	93.0	8	72.7	Fisher	<0.05*
Marital status:						
Single	62	24.2	3	27.3		
Married	194	75.8	8	72.7	Fisher	0.73
Number of children:						
0	10	5.1	1	11.1		
1-2	110	56.1	4	44.4	--	--
3+	76	38.8	4	44.4		

(*) Statistically significant *(--) Test result not valid*

Table (7): Factors associated with conflict perceived by staff nurses and their head nurses

Factors	Nursing category				Chi-Square Test	p-value
	Head nurse (n=81)		Staff nurses (n=267)			
	No.	%	No.	%		
Nurse's skills and practice	39	48.1	135	50.6	0.14	0.70
Managerial conduct of superior	8	9.9	82	30.7	14.07	<0.001*
Leadership behavior of superior	13	16.0	165	61.8	52.05	<0.001*
Administrative system	15	18.5	67	25.1	1.49	0.22
Multiplicity of nurse's roles	46	56.8	196	73.4	8.10	<0.001*
Opportunities for self-actualization	56	69.1	250	93.6	35.14	<0.001*
Reward system	39	48.1	234	87.6	57.33	<0.001*
Nature of nursing care environment	7	8.6	44	16.5	3.05	0.08
Non-nursing function load	40	49.4	177	66.3	7.57	0.006*
Nurses' differences and value system	44	54.3	180	67.4	4.65	0.03*
Shortage of resources	76	93.8	260	97.4	Fisher	0.16

(*) Statistically significant

Table (8): Relation between compromising conflict resolving strategy utilized by head nurses and their socio-demographic characteristics

	Compromising strategy				Chi-Square Test	p-value
	Used		Not used			
	No.	%	No.	%		
Hospital:						
Medicine/pediatrics	19	47.5	9	22.0		
Emergency	21	52.5	32	78.0	5.84	0.02*
Department type:						
Critical care	14	35.0	9	22.0		
Emergency	14	35.0	24	58.5	4.57	0.21
Medical	2	5.0	1	2.4		
Surgical	10	25.0	7	17.1		
Age (years):						
<25	2	5.0	0	0.0		
25-	25	62.5	21	51.2	3.82	0.15
30+	13	32.5	20	48.8		
Experience years as leader:						
<5	15	37.5	12	29.3		
5+	25	62.5	29	70.7	0.62	0.43
Marital status:						
Single	19	47.5	13	31.7		
Married	21	52.5	28	68.3	2.11	0.15
Number of children:						
0	2	9.5	4	14.3		
1-2	14	66.7	17	60.7	0.30	0.86
3+	5	23.8	7	25.0		

(*) Statistically significant

Table (9): Relation between compromising conflict resolving strategy preferred by staff nurses and their socio-demographic characteristics

	Compromising strategy				Chi-Square Test	p-value
	Preferred		Not preferred			
	No.	%	No.	%		
Hospital:						
Medicine/pediatrics	88	53.0	49	48.5		
Emergency	78	47.0	52	51.5	0.51	0.48
Department type:						
Critical care	72	43.4	38	37.6		
Emergency	49	29.5	37	36.6	1.72	0.63
Medical	15	9.0	10	9.9		
Surgical	30	18.1	16	15.8		
Age (years):						
<25	22	13.3	24	23.8		
25-	78	47.0	40	39.6	4.96	0.08
30+	66	39.8	37	36.6		
Nursing qualification:						
Technical institute	8	4.8	3	3.0		
School diploma	158	95.2	98	97.0	Fisher	0.54
Nursing experience years:						
<5	11	6.6	10	9.9		
5+	155	93.4	91	90.1	0.93	0.34
Marital status:						
Single	35	21.1	30	29.7		
Married	131	78.9	71	70.3	2.53	0.11
Number of children:						
0	9	6.8	2	2.8		
1-2	73	54.9	41	56.9	1.47	0.48
3+	51	38.3	29	40.3		

Table (10): Relation between level of conflict and conflict resolving strategy utilized by head nurses

Conflict resolving strategy	Conflict				Chi-Square Test	p-value
	Present		Absent			
	No.	%	No.	%		
Accommodating	5	45.5	26	37.1	Fisher	0.74
Collaborative	10	90.9	62	88.6	Fisher	1.00
Compromising	7	63.6	33	47.1	1.03	0.31
Competing	3	27.3	11	15.7	Fisher	0.39
Avoiding	0	0.0	0	0.0	0.00	1.00

Table (11): Relation between level of conflict and conflict resolving strategy preferred by staff nurses

Conflict resolving strategy	Conflict				Chi-Square Test	p-value
	Present		Absent			
	No.	%	No.	%		
Accommodating	12	13.8	42	23.3	3.31	0.07
Collaborative	83	95.4	173	96.1	Fisher	0.75
Compromising	48	55.2	118	65.6	2.69	0.10
Competing	18	20.7	33	18.3	0.21	0.65
Avoiding	1	1.1	3	1.7	Fisher	1.00

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الملخص العربى

الصراع بين الممرضات وطرق الحل التي يستخدمها رؤسائهن

مقدمة:

يتواجد الصراع في كل جوانب الحياة وفي المؤسسات ،وذلك لتعقد العلاقات الإنسانية والتفاعل بين أعضاء المؤسسة الواحدة واعتماد كل منهم علي الآخر لاداء دوره .ووجود الصراع لايعنى بالضرورة أن ثمة عملية سلبية تحدث . فهي عملية طبيعية من الممكن أن تكون لها نتائج بناءه أو هدامة،وذلك يعتمد بدرجة كبيرة علي النمط الإداري المستخدم للتعامل مع هذا الصراع، وعلى هذا، فاستخدام النمط غير المناسب لنوع الصراع قد يؤدي إلى انخفاض القدرة الإنتاجية وعدم الثقة بين موظفي المؤسسة وقد يخلق تباعدا مع بعضهم البعض.ومن ناحية أخرى ،فان تناول الصراع بشكل جيد يثير المنافسة و يظهر الفروق الموضوعية داخل المؤسسات ويعمل كقوى محفزة 0

أهداف البحث :

تهدف هذه الدراسة إلى التعرف على الأنماط الإدارية المختلفة التي تتبعها رئيسات التمريض لحل الصراع الـذي يواجههن أثناء العمل بمستشفيات جامعة الزقازيق من خلال:

- تحديد مستوي ونوع الصراع بين الممرضات وبعضهن البعض ،وبين الممرضات ورئيساتهن كما تعبـر عنها الممرضات أنفسهن وكذلك رئيسات الو حدات المختلفة.
- التعرف على الأنماط الإدارية المختلفة التي تتبعها رئيسات التمريض في حل هذه الصراعات بواسـطة القيادات التمريضية.
- تحديد آراء الممرضات المتعلقة بما تفضلنه من الأنماط المستخدمة في حل الصراع.

مكان الدراسة:-

تمت هذه الدراسة في جميع الوحدات العامة بمستشفيات جامعة الزقازيق.

طرق وأدوات البحث:-

تكونت أدوات البحث من 1 8 مشرفة تمريض لا تقل خبرتهن عن سنة في هذا الموقع الإداري ،ومن 267ممرضة لا تقل خبرتهن عن ستة اشهر في مجال التمريض، وكانت أدوات البحث المستخدمة كالآتي:-

- استبيان يتضمن الملامح الشخصية لرئيسات تمريض الوحدات أو الممرضات.
- استبيان يملا بواسطة التمريض ومشرفات التمريض ، يحتوي علي استمارة تهدف إلى تحديد الصراعات التي تواجههن بالمستشفيات.
- استبيان يملا بواسطة مشرفات التمريض ويهدف إلى معرفة الأساليب المستخدمة في حل الصراعات.
- استبيان يملا بواسطة التمريض يهدف إلى التعرف علي آرائهن فيما تفضلنه من الأساليب المستخدمة في حل الصراعات.

النتائج:- أسفرت نتائج الدراسة ما يلي:

- نسبة الصراع الذي يواجه الممرضات مع الأقسام الأخرى أو الصراع بين الممرضات داخل المجموعة هما أعلى نسبة ،ونسبة الصراع الداخلي لدى الممرضات هو الأقل نسبة.
- بالنسبة لأنماط الحلول المستخدمة في حل الصراعات وجد أن مشرفات التمريض يفضلن استخدام نمـط مشاركة أطراف الصراع (88%) وكذلك الممرضات يفضلن استخدامه (95%)،ويليه الاتفاق الودي بين الأطراف ثم نمط الاحتواء والمنافسة بينما كان التفادي والهروب من الصراعات اقل الأنماط المستخدمة وهذا بالنسبة للمجموعتين.

الخلاصة والتوصيات:-بناء علي نتائج الدراسة يوصي بالأتي:-

- عمل برامج تدريبية أثناء الخدمة لقيادات التمريض علي أساليب حل الصراعات.
- تشجيع النمط التعاوني في حل الصراعات.
- عمل دراسات للبحث في تأثير الصراعات علي العمل والعاملين وكذلك بالعلاقة بين أنماط الحلول المستخدمة في الصراعات والأنماط القيادية لمشرفات التمريض.

EVALUATION OF HEALTH RELATED – QUALITY OF LIFE IN PATIENTS WITH CHRONIC OBSTRUCTIVE PULMONARY DISEASE AT ZAGAZIG UNIVERSITY HOSPITALS

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Abstract

Chronic obstructive pulmonary disease (COPD) is a disease state characterized by progressive and irreversible airflow obstruction. The COPD is an important public health problem in both developed and developing countries with a high prevalence among persons with low socioeconomic status and in countries where cigarette smoking is still very common. The COPD is a source of significant disability in work life, family role, and functions of daily living, thereby health-related quality of life (HRQoL) decreases. The aims of this study were to assess patients' knowledge about COPD and evaluate their HRQoL, which might affect their management. adescriptive design was used to achieve the aim of the study. The study subjects composed of 100 patients, all of them were drawn from the Out Patient Chest Clinic and Department of Chest Diseases at Zagazig University Hospitals. Data was collected by using a questionnaire sheet which designed by the investigator after reviewing related literature. Results of the study revealed that the total correct patients' knowledge regarding their disease was low (14%), the COPD has an impact on the subjects health, function and performing their activities of daily living. The majority (82%) of the study subjects were suffering from psychological disturbance. Thus a respiratory rehabilitation program for these patients is recommended to improve their quality of life and provide them with adequate information about COPD and how they cope with there chronic disease and disability caused by it.

Introduction

According to *Hoeman (2002)* classification, the airway includes: *1)* conducting airways which extend from the nose, pharynx, larynx, trachea, and down through the terminal bronchioles and functioning as conductors for the distribution of gases throughout the lung*;* and *2)* an acinus, which is the lung tissue distal to a terminal bronchiole and composed of four orders of respiratory bronchioles: alveolar ducts, alveolar antra, alveolar sacs, and alveoli. It is the functioning unit of the lung and acts as diffusing surface area.

In 1998, the NHLBI declared that, COPD is currently the fourth leading cause of death in the world and is considered as the second leading cause of disability. It is also responsible for a common medical problem and responsible for a significant part of physician visits and

hospitalizations. There is no doubt that COPD is an important public health problem in both developed and developing countries. In a WHO report, it was estimated that 2.660.000 deaths were attributed to COPD in 1999 worldwide, which represents 4.8 % of all deaths *(WHO, there* is a higher prevalence *2000)*.

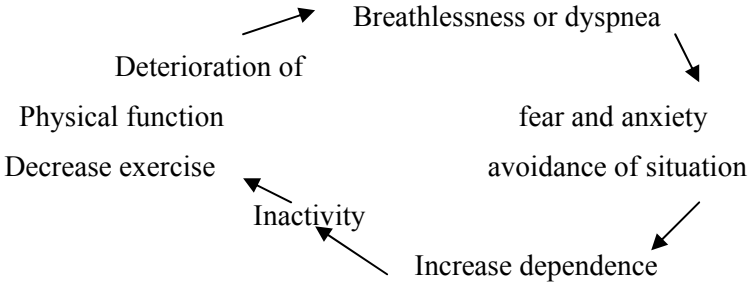
Murray and Lopez (1996), reporting prevalence of COPD among persons with a low socioeconomic status and in countries where cigarette smoking is still very common,

Whereas, *Prescott et al. (1999)* identified that, there is evidence that the risk of developing COPD is inversely related to socioeconomic status. It is not clear however whether this pattern reflects exposures to indoor and outdoor air pollutants, overcrowding, and poor nutrition.

The pathologic changes in the lungs lead to corresponding physiologic changes including mucus hypersecretion, ciliary dysfunction, airflow limitation, pulmonary hyperinflation, gas exchange abnormalities, pulmonary hypertension, and cor pulmonale *Mackin and Bullock (2000)*. *Romaine et al. (2001)* added that, mucus hypersecretion and ciliary dysfunction lead to chronic cough and sputum production. The expiratory airflow limitation is primarily caused by fixed airway obstruction and increase in airway resistance. *wagner et al. (2001)* clarified that, in advanced COPD, peripheral airway obstruction and vascular abnormalities reduce the lung's capacity for gas exchange, producing hypoxemia and later on hypercapnia.

Cullen (1999) focused at, on COPD as a source of disability in work, family role, and functions of daily living, thereby it leads to decreased health-related quality of life (HRQoL) and increased morbidity. He added that the goal of health services is to help the patients to achieve the best possible health in terms of physical, social and mental functioning.

King and Hinds (2003) pointed out that, the patients with COPD are usually suffering from airflow limitation, dyspnea, muscle wasting , and respiratory disability which have a considerable physical, psychological, and financial impact on the patients' family, and society Such individuals may seek medical attention for an acute chest illness, manifesting with dyspnea, increased sputum production, persistent cough, audible expiratory chest wheeze, decreased exercise tolerance, restlessness, anorexia, fatigue, anxiety, and confusion.



Rice et al. (2000) listed the goals of medical management of COPD patients are to*: 1)* improve ventilation, *2)* promote patent airway by removal of bronchial secretions, *3)* treat infection if present, *4)* improve respiratory muscle strength, and *5)* decrease the amount of bronchospasm .

As stated by *Swearingen (2003)*, the medical plan of COPD treatment aims to: *1)* smoking cessation to stop the progress of disease, *2)* maximize breathing by removing airway secretions, and *3)* halting bronchospasm by using bronchodilators, corticosteroids, O_2 therapy, and chest physiotherapy. Surgical therapy as bullectomy, lung volume reduction surgery and lung transplantation may be indicated for certain cases. Considering nursing care plan, *Carpenito-Moyet (2004)* mentioned that, the nurse must put a plan of care for each COPD patient individually and entirely according to the needs of each patient. In COPD patients, there are several problems that must be considered such as*: 1)* ineffective breathing pattern related to emotional stimulation and fatigue; *2)* nutritional deficit less than body

requirement related to nausea, vomiting secondary to shortness of breath and dyspnea; *3)* activity intolerance related to inability to meet O_2 needs; and *4)* risk for injury related to respiratory infection. Close observation and evaluation are required throughout the nursing care plan.

Hogan and Madayag (2004) highlighted that, nurses are playing an active role in educating COPD patients and any significant health care givers. They added that nurses must inform the patients about the following: *1)* taking their prescribed drugs, *2)* covering the nose and mouth when outside in cold weather, *3)* scheduling their activities to allow adequate rest, *4)* smoking cessation that can improve symptoms, *5)* how to use pursed-lip and diaphragmatic breathing techniques properly, *6)* avoiding lung irritants as cold air, second hand smoke, sprays, and dust, *7)* avoiding exposure to infected persons and take pneumo-coccal and influenza vaccines, *8)* maintaining high-calorie diet and forcing fluids to 8 to 10 glasses of fluid, *9)* avoiding constipation and straining, and *10)* monitoring weight twice-weekly.

The *WHO (2002)* defined QoL as individuals' perceptions of their position in life in the context of culture and value systems in which they live, and in relation to their goals, standards, and concerns. *Aaronson (2001)* stated that, there are five generally accepted dimensions to QoL; physical/health functioning, psychological, socio-economical, spiritual, and somatic/disease *Robinson (2001)* identified that, QoL is affected by numerous factors including: age, sex, socio-economic status, culture, environment, information provided to patients and family member, personal, or social issues, disease symptoms, diagnosis, management, and nursing intervention.

Recently, Mailla *et al. (2004)* reported that, quality of life (QoL), for patients with COPD can be improved by applying a pulmonary rehabilitation program which aims to: *1)* reduce work of breathing; *2)* improve exercise performance and activities of daily living; *3)* correct nutritional status; and *4)* improve emotional status. This program includes: *1)* breathing exercises *2)* smoking cessation; and *3)* patient and family teaching about psychological and nutritional support and medication regimen.

According to *Lewis (2000)* the most serious complications of COPD are: respiratory failure, heart failure, cor-pulmonale, pulmonary hypertension, peripheral edema, blood gas abnormalities, polycythemia, and hepatomegaly. The factors that may lead to complications of COPD are presence or not of the following: repeated respiratory infection due to decreased immune resistance and respiratory defense mechanisms; spontaneous pneumothorax from rupture of bulla; continued smoking; myocardial infraction; and adverse effects of drugs.

As Gore et al. (2000) stated that, the COPD has been described as a major neglected medical and social problem due to a slowly progressive development of airflow limitation. A prolonged period of disabling dyspnea and increasingly frequent hospital admissions reflecting deteriorating lung function and usually predicting a premature death and in this tocase both QoL and survival are poor.

Technical Design:

A descriptive research design was used to achieve the aim of this study.to accurtely identify characteristics of QOL for COPD patients as well as the frequncy of affected .

Subjects and Setting:

A sample of convenience 100 patients, attending the Outpatient Chest Clinic and Department of Chest Diseases, at Zagazig University Hospitals

Tools of Data Collection:

The data were collected through a questionnaire sheet, which designed by the investigator and adopted from previous research references after reviewing related literature. It conducted in Arabic form in order to prevent misunderstanding. The investigator interviewed

the subjects and gave them chance for asking any questions and fill the questionnaire sheet. The time needed to fill in the questionnaire sheet ranged between 15-30 minutes. This questionnaire included 62 questions covering the following items:

(I) Socio-demographic data *includes*: *1) gend*er, age, and occupation; from (Q_{1-3}). *2)* Social score includes: level of education, family income, crowding index (family number/room number), and sanitation; from (Q_{4-8}). Social score was classified into: low, middle, and high social standard adopted from (*Fahmy and El-Sherbini, 1983*), 3*)* body mass index (BMI). Body weight and height measured with subjects wearing indoor clothing and shoes. The BMI was calculated as weight in kilo gram divided by height in meter square and classified into: low weight (<20), desirable weight (20-24.9), over weight (25-29.9), obese (30- < 40), morbid obesity (≥40) *(*Q_{9-10}) (*Mann and Truswell, 1998)*.

(II) Health-related quality of life *measured* by the questionnaire sheet adopted from chronic respiratory disease questionnaire *(Guyatt et al., 1987)* to evaluate:

(III) Frequency of cough, sputum, chest wheeze, and dyspnea classified into: less frequent (occur once or twice per day); moderately frequent (occur three or four times per day); highly frequent (occur > four times per day), *2)* the impact of the degree of COPD on the patients' daily life activities, employment, social, and psychological status. It was classified into moderate and severe impact.

Procedure:

An official permission was obtained from the director of the Outpatient Chest Clinic and the Chest Disease Department, Zagazig University Hospitals.Data were collected by the investigator over a period of 3 months (February- April) during the academic year (2003- 2004) .The purposes of this study were explained to the patients and their consent was obtained informally. They were assured that no risks or discomfort anticipated during the interview. As for scoring, each right answer takes one grade "1" while the wrong answer takes "zero". All scores were added for every patient.

Results

As can be seen in **table (1)**, more than half of the study subjects were males (60%), nearly half of them (48%) aged between 40- <60 years, the highest rate of the subjects were farmers (74%), nearly half of them were low social standard (48%). Also, the table reveals that 35% among the study subjects were over weight.

Table (2) shows that, the majority of the study subjects were admitted to hospital (72%), while 55.6% of them were admitted to the first time. Also, the table shows that less half of the study subjects stayed for less than 5 days in hospital (45.8%) and 54.2% of them stayed for more than 10 days.

As can be seen in **table (3)** the majority of the study subjects were suffering from psychological disturbance (82 %) and nearly half of the study subjects were suffering from fear and panic condition (4

As can be observed in **table (4)** a statistically significant relationship was found between Disease duration and the occurrence of psychological disturbance (p-value =0.002) (6.3 %).

Table (5) reveals that, statistically significant relationship between ADLs and psychological condition among the study subjects were found regarding to walking rapidly, and personal hygiene (p-value <0.05), while it was highly significant as regards carrying things (p-value =0.001).

Table (6) shows that, statistically significant relationship between the subjects health condition and its impact on ADLs were found regarding to upstairs, walking rapidly, carrying things, and personal hygiene (p-value <0.05).

Table (7) reveals that, statistically significant relationship between the occurrence of cough and ADLs among the study subjects was found regarding to house working (p-value = 0.017), while no statistically significant difference was found between the occurrence of cough and other ADLs (p-value > 0.05).

Table (8) shows that, statistically significant relationship between dyspnea and its impact on ADLs among the study subjects was found regarding to carrying things (p-value 0.001), while no statistically significant differences were found regarding to the impact of dyspnea on the other ADLs items (p-value > 0.05).

Table (9) reveals that, statistically significant relationship between sputum production and its impact on ADLs among the study subjects were detected regarding to upstairs, carrying things, and personal hygiene (p- value < 0.05).

Figure (1) *illustrates* that, the COPD symptoms (cough, sputum, dyspnea, and chest wheeze) were highly frequently occurring among the study subjects over (60%).

As can be observed in **Figure (2)**, the majority of the impact of COPD on the subjects health and function was regarding to the occurrence of cough (100%), sputum (100%), and dyspnea (100%), followed by chest pain (90%), and chest wheeze with expiration (90%). The majority of the subjects talk that their jobs have been affected and they became dependent on their family member (95%, & 79% respectively). It also revealed that loss of appetite did not occur for 62% of the study subjects.

Figure. (3) Illustrates that, there was an impact of COPD on ADLs. The highest severe impacts of COPD on ADLs were regarding to upstairs, carrying things, and walking rapidly (84%, 67%, & 63% respectively). Also, the figure shows that the highest moderate impact of COPD on ADLs was regarding to personal hygiene (60 %) followed by house work (52 %).

Discussion

Calverley et al 2001 explained that, COPD as a chronic illness affects the basic function of breathing, diminishes vitality, and produces symptoms that cause psychosocial complications and deterioration in all domains of health-related quality of life (symptoms, physical activity, and psychosocial function).

The current study revealed that, nearly half of the study subjects' age ranged between 40-<60 years. This result is in agreement with *Ayoub (1997),* who found that COPD tends to affect individuals in the fourth to fifth decade during their peak productivity and when they still have family roles and responsibilities. The present study also clarifies that the majority of the study subjects were males and farmers. This could be entirely due to males' history of smoking and occupational factors.

In this respect, *Meade et al. (2001)* found that, the patients with COPD had frequent exacerbation in term of increased frequency of cough, sputum production and chest wheeze in addition to inadequate response to outpatient management and frequent admission to inpatient respiratory unit. In this regards, the present study clarified that these symptoms were highly frequent among the study subjects).

Regarding to the impact of COPD on the study subjects health and function, the present study revealed that the majority of its impact were related to the occurrence of cough, sputum production and dyspnea, followed by chest pain and chest wheeze with expiration. Also, the findings revealed that the majority of the study subjects stated that their job has been affected and that they became dependent on their family members).

Also the current study demonstrated that COPD had an impact on performing activities of daily living (ADLs), the highest impact was regarding to upstairs, carrying things and walking rapidly).These results are consistent with *Gore et al. (2000)*, who found that, the patients with COPD had poor QoL and deterioration in their health, which present in all domains of QoL: symptoms, psycho-social function and performing physical activity. *Shafazand et al. (2001)* commented that, patients with COPD have trouble in walking upstairs or carrying even small packages and suffering from loss of physical ability and increased dependence on others for completing even simple tasks consequent to progress of COPD. *Vermeire (2002)* added that, COPD impairs the ability of the patients to carryout their ADLs and adversely affects on QoL.

The impact of COPD on the study subjects' psychological state, the present study clarified that the majority of the study subjects were suffering from psychological disturbance in the form of fear, panic, frustration and depression). Also the current study revealed that the psychological state of the study subjects was affected by the disease year It may be due to the prolonged dependence on their family members in performing their even simple tasks, the increase in the cost of management, the physical disability and loss of their jobs as they became chronic ill patients.

Statistically significant relationship between psychological state and impairment in performing ADLs were found regarding to walking rapidly, carrying things, and personal hygiene (table 9). *Coy (2001)* commented that, COPD patients had many health problems regarding to self-care and performing their usual activities. *Oga et al. (2002)* added that, COPD patients usually had exercise intolerance and impaired in their HRQoL. Also, *Dahlen and Janson (2002)* concluded that, COPD patients had several emotional disturbances such as fear and frustration. They identified that anxiety in COPD patients had been closely related to dyspnea, while depression had been attributed to physical illness and inability to perform activities of daily living.

The result of the present study showed that the statistically significant relationship between the subjects health condition and its impact on performing ADLs regarding upstairs, walking rapidly, carrying things and personal hygiene This result clarifies that worsening in health condition is associated with muscle wasting, impaired gas exchange and deterioration of health, secondary to effect of COPD on respiratory muscles.

The present study clarified a statistically significant relationship between the occurrence of cough and ADLs among the study subjects regarding house

This result is in agreement with *Smith et al. (2003) & Yaman et al. (2003)* who found that, cough is a characteristic symptom of COPD. Also, in recent study conducted by *Spencer et al. (2004)*, who showed that, patients with COPD exacerbation usually suffer from deterioration in their clinical status with worsening of respiratory symptoms, which limit performing ADLs.

The present study indicated that statistically significant relationship between dyspnea and its impact on performing ADLs among the study subjects was found regarding carrying things This finding is consistent with those of *Lareau et al. (1994) and Jones (1995),* who found that, dyspnea is the primary symptom of COPD limiting activities of daily living. Patients are usually suffering from dyspnea while performing routine daily tasks such as carrying heavy objects, bathing and performing household tasks. *Sahebjami and Sathianpitayakul (2000)* added that, dyspnea particularly during physical activities, is one of the predominant complaints of patients with COPD. Such result explains that, when COPD

patients perform ADLs they commonly suffer from severe cough and dyspnea due to increase in the work of breathing, increase in the need to energy, and production of dusts or smoke which irritate the respiratory system. In turn, this explains why the majority of the study subjects had become dependent on family members and lost their jobs due to effect of COPD on their health and function

The present study revealed that, statistically significant relationship between sputum production and performing ADLs among the study subjects were found to be related to upstairs, carrying things and personal hygiene This finding highlights that, performing such activities is associated with excessive sputum production that might be due to exertion and energy production, which liquefy the sputum and stimulate productive cough.

The findings of the present study revealed that:

1 The majority of impact of COPD on the study subjects health and function were regarding to the occurrence of COPD symptoms, their jobs have been affected and they became dependent on their family members.
2 Patients with COPD were suffering from severe impairment in performing activities of daily living.
3 Most COPD patients were suffering from psychological disturbance.
4 A significant relationship was found between the COPD patients' health condition and impairment while performing their activities of daily living.
5 A statistically significant relationship was found between psychological disturbance among COPD patients and impairment in performing activities of daily living.
chronic obstructive pulmonary disease affects health-related quality of life in all domains (physical, social, psychological, and spiritual). So, health education and rehabilitation program are important for COPD patients to improve their HRQoL.

Recommendations;

According to the results the following recommendations can be deduced:-

1 A pulmonary rehabilitation program for COPD patients must be conducted at the out patient chest clinics. It should include nutritional assessment and support, dyspnea assessment, exercise training and breathing exercises retraining as chest physiotherapy, and pursed-lip breathing, in addition to, Physical, social, and psychological rehabilitation.

2 Educational materials such as posters and illustrated booklets must be offered from the out patient chest clinics for COPD patients to provide adequate information about pathophysiology of their disease, its complications, and proper use of medications in order to correct and improve their knowledge.

3 More stress and attention to be paid to many sectors of the community about the impact of smoking on their quality of life as through audio-visual materials (radio and television programs).

4 A community survey must be done for early detection of people who are at risk for COPD and early management in order to avoid deterioration in their illness and their quality of life.

Table (1): Percentage distribution of subjects' demographic characteristics.

	Total subjects (n=100)	
	No	%
Sex:		
- Male	60	60
- Female	40	40
Age (in years):		
20 -	5	5
30 -	11	11
40 -	48	48
60+	36	36
Occupation:		
-Farmer	74	74
-Workman	16	16
-Employee in factory	4	4
-Officer in concernment	6	6
Social standard :		
-Low	48	48
-Middle	45	45
-High	7	7
22 Body mass index:		
-Low weight	13	13
-Desirable weight	25	25
-Over weight	35	35
-Obese	21	21
-Morbid obesity	6	6

Table (2): Percentage distribution of the study subjects' health history

Items	*No*	*%*
Disease duration:		
-1- y	20	20
-3- y	19	19
-5> y	61	61
Total	*100*	*100*
Health condition :		
-Improve	20	20
-Stable	15	15
-Recurrent	30	30
-Worsen	35	35
Total	*100*	*100*
Hospital admission*:*		
-Yes	72	72
-No	28	28
Total	*100*	*100*
Number of admissions:		
-Once	40	55.6
-Twice	14	19.4
-> Twice	18	25.0
Total	*72*	*100*
Stay period:		
- 5- days	33	45.8
-10- days	11	15.2
-15+days	28	39.0
Total	*72*	*100*

Table (3): Percentage distribution of the impact of COPD on the subjects' psychological state.

Items	*No*	*%*
Psychological state:		
• Affected	82	82
• Not affected	18	18
Total	*100*	*100*
The common psychological disturbances:		
- Fear and panic	38	46.3
- Depression	10	12.2
- Frustration	30	36.6
- Satisfaction	4	4. 9
Total	*82*	*100*

Table (4): Chi-square analysis comparing Disease duration and psychological condition.

	1- < 3 y (n= 20)		*3- ≤ 5 y (n= 19)*		*> 5 y (n= 61)*			
	No	%	No	%	No	%		
Affected	15	75	11	57.9	56	91.8	12.12	0.002*
Not affected	5	25	8	42.1	5	8.2		

** Significant p<0.05*

Table (5): Chi-square analysis comparing ADLs and psychological condition among the study subjects.

	Affected psych State (n=82)		*Not affected psych state (n=18)*			
	No	%	*No*	%		
Upstairs	70	85.37	14	77.78	0.63	0.43
Walking rapidly	56	68.29	7	38.89	5.5	0.019*
Carrying things	62	75.61	5	27.78	15.3	0.001**
House work	42	51.22	6	33.33	1.89	0.16
Personal hygiene	38	46.34	2	11.11	7.63	0.005*

** p <0.05 Significant* *** P <0.001 highly significant*

Table (6): Chi-square analysis comparing the subjects' health condition and its impact on ADLs.

	Improve (n= 20)		*Stable (n=15)*		Intermittent (n=30)		*Worsen (n=35)*			
	No	%	*No*	%	*No*	%	*No*	%		
Upstairs	12	60	11	73.3	28	93	33	94.3	14.5	0.001*
Walking rapidly	9	45	6	40	21	70	27	77.1	9.8	0.02*
Carrying things	7	35	11	73	21	70	28	80.0	12.3	0.006*
House work	8	40	7	46.7	12	40	21	60.0	3.3	0.14
Personal hygiene	5	25	6	40	6	20	23	65.7	14.6	0.002*

** p <0.05 Significant*

Table (7): Chi-square analysis comparing the impact of frequent cough on among the study subjects.

	Less frequent cough (n=13)		*Moderate frequent cough (n= 18)*		*Highly frequent cough (n= 69)*			
	No	%	No	%	No	%		
Upstairs	9	69.23	15	83.33	60	86. 96	2.56	0.27
Walking rapidly	6	46.15	10	55.56	47	68.12	2.79	0.24
Carrying things	6	46.15	11	61.11	50	72.46	3.77	0.15
House work	2	15.38	7	38.89	39	56.52	8.15	0.017 *
Personal hygiene	4	30.77	7	38.89	29	42.03	0.59	0.74

** p <0.05 Significant*

Table (8): Chi-square analysis comparing the impact of frequent dyspnea on ADLs among the study subjects.

	Less frequent dyspnea (n=19)		*Moderate frequent dyspnea (n= 20)*		*Highly frequent dyspnea (n= 61)*		X^2	*P-value*
	No	%	No	%	No	%		
Upstairs	15	79.94	16	80	53	86.89	0.98	0.61
Walking rapidly	8	42.1	12	60	43	70.5	5.11	0.08
Carrying things	8	42.1	9	45	50	81.96	15.9	0.001*
House work	8	42.1	10	50	30	49.18	0.33	0.84
Personal hygiene	6	31.58	8	40	26	42.62	0.74	0.69

** p <0.05 Significant*

Table (9): Chi-square analysis comparing the impact of frequent sputum production on ADLs among the study subjects.

	Less frequent sputum (n=21)		*Moderate frequent sputum (n= 15)*		*Highly frequent sputum (n= 64)*			
	No	%	No	%	No	%		
Upstairs	13	61.9	13	86.67	58	90.63	9.8	0.007*
Walking rapidly	10	47.62	9	60.0	44	68.75	3.1	0.21
Carrying things	8	38.09	8	53.33	51	79.69	13.9	0.001*
House work	9	42.86	7	46.67	32	50.0	0.34	0.84
Personal hygiene	3	14.29	4	26.67	33	51.56	10.5	0.005*

** p <0.05 Significant*

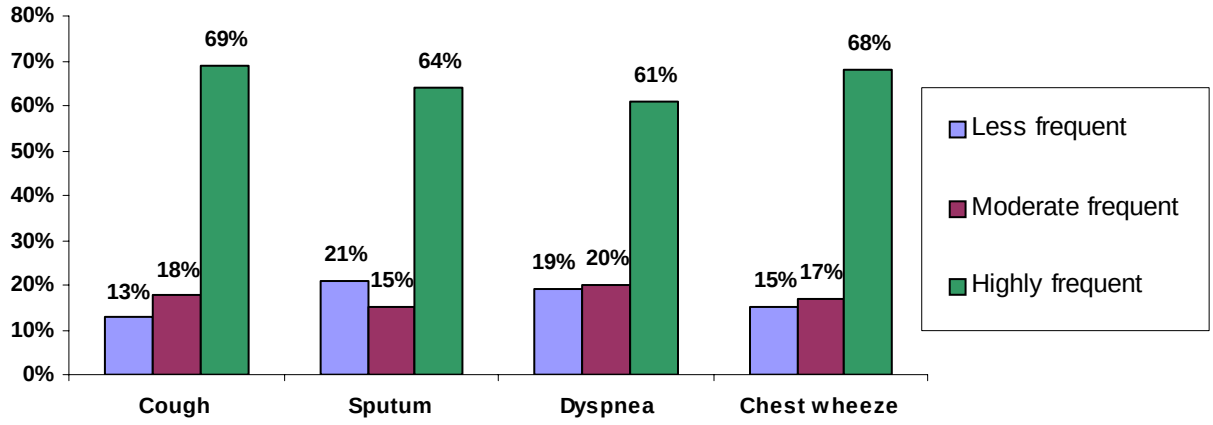


Fig.1: Percentage distribution of the frequency of COPD symptoms among the study subjects

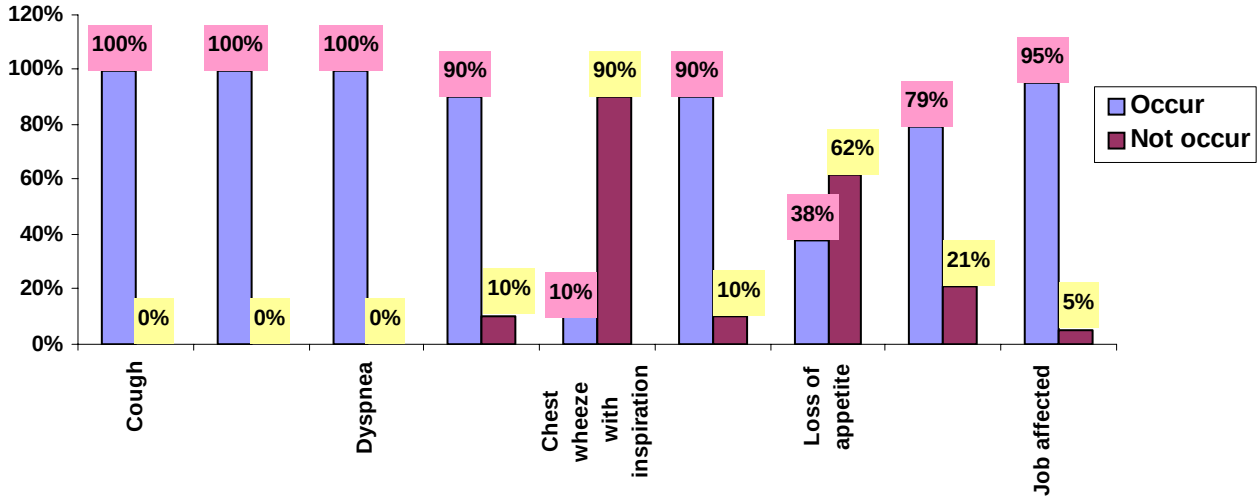


Fig.2: Percentage distribution of the impact of COPD on the study subjects health and function.

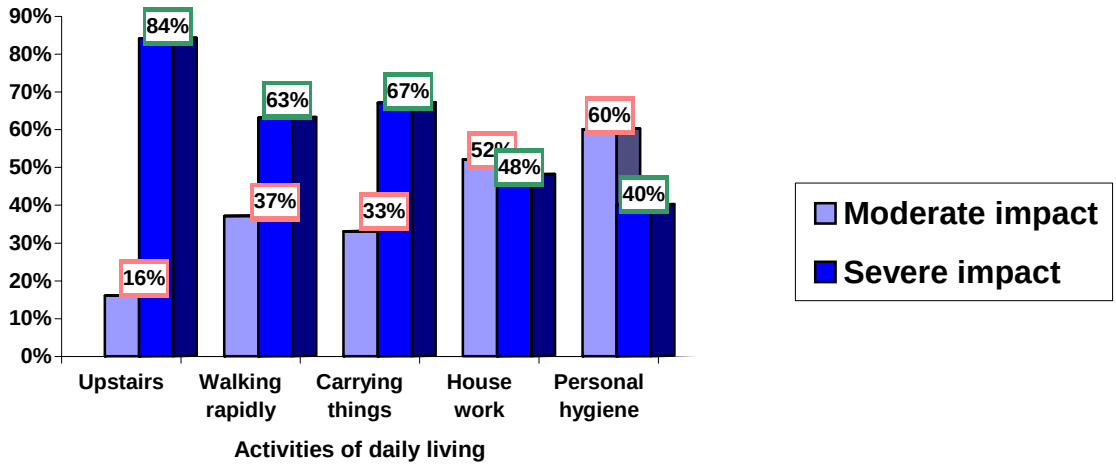


Fig 3: Percentage distribution of the impact of COPD on activities of daily living among the study subjects.

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الملخص العربى

تقويم نوعية الحياة المرتبطة بالصحة لدي مرضي الانسداد الرئوي المزمن لمستشفيات جامعة الزقازيق

مقدمة

يعتبر مرض الانسداد الرئوي من الأمراض المزمنة التي يحدث فيها انسداد لمجرى التنفس بصورة متقدمة لا رجعـة فيها .من ثم فهو من الأسباب الرئيسية للإعاقة والوفاة وحدوث الخلل في نوعية الحياة الصحية و التي تعنى الاستمتاع بالحياة والإحساس بالسعادة والقدرة على القيام بالأنشطة اليومية المختلفة بدون ألم .و حيث أن هؤلاء المرضى يعانون من أعراض مرضية مزمنة و كثيرة مثل الكحة والبلغم وضيق النفس و تزييق وآلام بالصدر وصـعوبة أداء أنـشطة حياتهم اليومية ومشاكل نفسية مثل الفزع والاكتئاب والخوف من مصيرهم وكذلك نتيجة الحد من أنشطتهم وفقد دورهم الأسرى نتيجة لتأثر وظيفتهم بهذا المرض .لذا فان نوعية الحياة الصحية لديهم قد تتأثر بدرجة كبيرة

أهـداف الدراســـــة:

تهدف هذه الدراسة إلى تقييم نوعية الحياة الصحية لديهم.

عينـــة ومكان الدراســة-:

نفذت هذه الدراسة بمستشفيات جامعة الزقازيق بوحدتي عيادة الصدر الخارجية وقسم الأمراض الصدرية واشـتملت الدراسة على 100مريض مصاب بالانسداد الرئوى المزمن ممن يترددون على هذه الأماكن إما للمتابعة أو للعلاج

أدوات البحـــــث-:

تضمنت أداة البحث على استمارة استبيان أعدت بعد مراجعة الدراسات السابقة لتجميع البيانات اللازمة لتحقيق أهداف هذه الدراسة و قد تم صياغتها باللغة العربية لمنع سوء الفهم.

النتائـج :

- يوجد تأثير للمرض على الحالة الصحية و الحياة اليومية والتى تمثلت فى اعتمادهم على أفراد أسـرتهم فـى القيام بالأنشطة اليومية و معاناتهم من مشاكل نفسية نتيجة هذه الإعاقة.
- توجد علاقة ذات دلالة إحصائية بين الحالة المرضية السيئة والخلل فى المقدرة على ممارسة الأنشطة اليومية
- توجد علاقة ذات دلالة إحصائية بين الحالة النفسية والعجز عن القيام بالأنشطة اليومية المختلفة.

التوصيات: وبناء على ما أسفـرت عنـه النتائـج السابقـة فالدارسـة توصـى بالآتي-:

- تنفيذ برنامج تأهيلي للتنفس بالعيادة الخارجية)للصدر (يشتمل على تقييم الحالة الغذائية و تقييم درجة ضـيق التنفس لديهم وتدريبهم على تمارين التنفس والتمارين البد نية العادية بهدف تحسين حالتهم الصحية إضافة إلي التأهيل الاجتماعي و النفسي.
- تقديم وسائل تعليمية تثقيفية مثل الكتيبات المصورة من خلال عيادة الـصدر لتـصحيح معلومـات هـؤلاء المرضى وتزويدهم بالمعلومات الخاصة بالتغيرات الفسيولوجية لهذا المرض ومضاعفاته وأسـبابه وطريقـة التداوى وكيفية التكيف مع هذا المرض المزمن.
- زيادة التركيز والانتباه من جميع قطاعات المجتمع عن التأثير السلبي للتدخين على نوعية الحياة الصحية.
- إجراء مسح شامل للمجتمع بهدف الاكتشاف المبكر لهذا المرض لتقديم العلاج المبكر وبالتالي تقليـل حجـم الإعاقة والتدهور في الحياة الصحية و أداء الأنشطة اليومية نتيجة هذا المرض .


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