Editorial Board

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CONTENS

Child abuse: How does it cause borderline personality disorder?

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Introduction

Although traumatic events in childhood are associated with a greater risk of borderline and other personality disorders, the actual cause of personality disorder isn't known. Most likely, no single factor explains its development. Instead it may be caused by a combination of heredity and environmental factors.

Borderline personality disorder is a serious emotional disturbance that's characterized by disappointing and unstable personal relationships, intense anger, impulsive actions, feelings of emptiness, and fears of abandonment — real or imagined. It may be that emotional trauma at a time when the brain isn't fully developed alters something in the brain, which decreases the ability to effectively deal with stressful situations ***(Eubanks et al., 2006).***

Childhood abuse can also be associated with other mental illnesses including depression, post-traumatic stress disorder, anxiety disorders and substance abuse disorders.

Definition

Borderline personality disorder (BPD) is often a devastating mental condition, both for the people who have it and for those around them. Perhaps shaped by harmful childhood experiences or brain dysfunctions, people diagnosed with borderline personality disorder live in a world of inner and outer turmoil. They have difficulty regulating their emotions and are often in a state of upheaval. They have distorted images of themselves, often feeling worthless and fundamentally bad or damaged. And while they yearn for loving relationships, people with borderline personality disorder typically find that their anger, impulsivity, stormy attachments and frequent mood swings push others away.

Over the last 10 years, increasing awareness and research are helping improve the treatment and understanding of borderline personality disorder. At the same time, it remains a controversial condition, particularly since so many more women than men are diagnosed with it, raising questions about gender bias. Although definitive data are lacking,

it's estimated that 1 percent to 2 percent of American adults have borderline personality disorder (BPD). It occurs in about one in every 33 women, compared with one in every 100 men, and is usually diagnosed in early adulthood. Contrary to lingering perceptions, emerging evidence indicates that people with BPD often get better over time and that they can live happy, peaceful lives.

Signs and symptoms

Finzi-Dottan & Karu (2006), Minzenberg et al., (2006), Gamble et al,. (2006) and Fosse & Holen (2007) reported that borderline personality disorder affects how people feel about themselves, how they relate to others and how they behave. People with BPD often have an unstable sense of who they are. That is, their self-image or sense of self often rapidly changes. They typically view themselves as evil or bad, and sometimes they may feel as if they don't exist at all. This unstable self-image can lead to frequent changes in jobs, friendships, goals, values and gender identity.

Relationships are usually in turmoil. People with BPD often experience a love-hate relationship with others. They may idealize someone one moment and then abruptly and dramatically shift to fury and hate over perceived slights or even misunderstandings. This is because people with the disorder have difficulty accepting gray areas — things are either black or white. For instance, in the eyes of a person with BPD, someone is either good or evil. And that same person may be good one day and evil the next.

In addition, people with BPD often engage in impulsive and risky behavior. This behavior often winds up hurting them, whether emotionally, financially or physically. For instance, they may drive recklessly, engage in unsafe sex, take illicit drugs or go on spending or gambling sprees. People with BPD also often engage in suicidal behavior or deliberately injure themselves for emotional relief.

Perkins &Allen (2006), Evren et al., (2006) and Glaser (2006) refers to other signs and symptoms of borderline personality disorder that include:

- Strong emotions that wax and wane frequently
- Intense but short episodes of anxiety or depression

- Inappropriate anger, sometimes escalating into physical confrontations
- Difficulty controlling emotions or impulses
- Fear of being alone

Causes

***Griffing et al., (2006*)** revealed that as with other mental disorders, the causes of borderline personality disorder are complex. The name arose because of theories in the 1940s and 1950s that the disorder was on the border between neurosis and psychosis. But that view doesn't reflect current thinking. In fact, some advocacy groups have pressed for changing the name, such as calling it emotional regulation disorder. Meanwhile, the cause of BPD remains under investigation, and there's no known way to prevent it. Possible causes include:

- **Genetics.** Some studies of twins and families suggest that personality disorders may be inherited.
- **Environmental factors.** Many people with borderline personality disorder have a history of childhood abuse, neglect and separation from caregivers or loved ones.
- **Brain abnormalities.** Some research shows changes in certain areas of the brain involved in emotion regulation, impulsivity and aggression. In addition, certain brain chemicals that help regulate mood, such as serotonin, may not function properly.

Risk factors

Personality forms during childhood. It's shaped by both inherited tendencies and environmental factors, or your experiences during childhood. Some factors related to personality development can increase the risk of developing borderline personality disorder. These include:

- **Hereditary predisposition.** You may be at a higher risk if a close family member — a mother, father or sibling — has the disorder.
- **Childhood abuse.** Many people with the disorder report being sexually or physically abused during childhood.
- **Neglect.** Some people with the disorder describe severe deprivation, neglect and abandonment during childhood.

When to seek medical advice

People with borderline personality disorder often feel misunderstood, alone, empty and hopeless. They're typically full of self-hate and self-disgust. They may be fully aware that their behavior is destructive and be distressed about it. Impulsivity may cause problems with gambling, driving or even the law. You may find that many areas of your life are affected, including relationships, work or school.

If you notice these things about yourself, talk to your doctor or a mental health provider. The right treatment can help you feel better about yourself and help you live a more stable, rewarding life.

If you notice these things in a family member or friend, talk to them about seeing a doctor or mental health provider. But keep in mind that you can't force someone to seek help. If the relationship has you unduly distressed, you may find it helpful to see a therapist yourself.

Screening and diagnosis

Personality disorders are diagnosed based on signs and symptoms and a thorough psychological evaluation. To be diagnosed with borderline personality disorder, someone must meet criteria spelled out in the Diagnostic and Statistical Manual of Mental Disorders (DSM). This manual is published by the American Psychiatric Association and is used by mental health professionals to diagnose mental conditions and by insurance companies to reimburse for treatment.

The DSM criteria note that people with BPD have a pattern of unstable relationships, self-image and mood, as well as impulsive behavior. These typically begin in early adulthood.

For BPD to be diagnosed, at least five of the following signs and symptoms must be present:

- Intense fears of abandonment
- A pattern of unstable relationships
- Unstable self-image
- Impulsive and self-destructive behaviors
- Suicidal behavior or self-injury
- Wide mood swings
- Chronic feelings of emptiness
- Inappropriate anger
- Periods of paranoia and loss of contact with reality

A diagnosis of BPD is usually made in adults, not children or adolescents. That's because what appear to be signs and symptoms of BPD may go away with maturity.

Complications

Borderline personality disorder can damage many areas of a person's life. Relationships, jobs, school, social activities, self-image — all can be negatively affected. Repeated job losses and broken marriages are common. Self-injury, such as cutting or burning, can result in scarring and frequent hospitalizations. Suicide rates among people with BPD are very high, reaching 10 percent ***(Murthi et al., 2006)***.

In addition, people with borderline personality disorder may have other mental health problems, too, including:

- Depression
- Substance abuse
- Anxiety disorders
- Eating disorders
- Bipolar disorder
- Other personality disorders

Because of their risky, impulsive behavior, people with BPD are also more vulnerable to unplanned pregnancies, sexually transmitted diseases, motor vehicle accidents and physical fights. They may also be involved in abusive relationships, either as the abuser or the abused ***(Malloyet al., 2007)***.

Treatment

Treatment for borderline personality disorder has improved in recent years with the adoption of techniques specifically aimed at people with this disorder ***(Stein et al., 2006, Dervic et al., 2006 & Berkoff et al., 2006)*** Treatment includes:

- **Psychotherapy.** This is the core treatment for BPD. Dialectical behavior therapy (DBT) was designed specifically to treat the disorder. Generally conducted through individual, group and phone counseling, DBT uses a skills-based approach to teach people how to regulate their emotions, tolerate distress and improve relationships.

- **Medications.** Medications can't cure BPD, but they can help associated problems, such as depression, impulsivity and anxiety. Medications may include antidepressant, antipsychotic and antianxiety medications.
- **Hospitalization.** At times, people with BPD may need more intense treatment in a psychiatric hospital or clinic. Hospitalization can also keep them safe from self-injury.

Because treatment can be intense and long term, people face the best chance for success when they find mental health providers with experience treating BPD.

Self-care

Living with borderline personality disorder can be difficult. You may fully realize that your behaviors and thoughts are self-destructive or damaging yet feel unable to control them. Treatment can help you learn skills to manage and cope with your condition.

Other things you can do to help manage your condition and feel better about yourself include:

- Sticking to your treatment plan
- Attending therapy sessions as scheduled
- Practicing healthy ways to ease painful emotions, rather than inflicting self-injury
- Not blaming yourself for having the disorder but recognizing your responsibility to get it treated
- Learning what things may trigger angry outbursts or impulsive behavior
- Not being embarrassed by having this condition
- Getting treatment for related problems, such as substance abuse
- Educating yourself about the disorder so you understand its causes and treatments better
- Reaching out to others with the disorder to share insights and experiences

Remember, there's no one right path to recovery from BPD. The condition seems to be worse in young adulthood and may gradually get

better with age. Many people with the disorder find greater stability in their lives during their 30s and 40s. Their inner misery may lessen and they go on to sustain loving relationships and enjoy meaningful careers.

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Identification of Universal Infection Control Precautions Followed By Nurses at Pediatric Hemodialysis Unit

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Abstract:

Chronic renal failure in the childhood is a part of life – long cycle of illness with progression through dialysis and transplantation under restricted universal infection control precautions (UPS). ***So, the aim of this study was*** *to assess the universal infection control precautions (UPS) followed by nurses at pediatric hemodialysis unit. This study included all nurses' personnel who involved in 50 hemodialytic procedure and they were 10 nurses.* ***Two tools were used to collect the necessary data****: A structured interview questionnaire sheet and a structured observational check list for nurses.* ***The results of the present study*** *showed that the majority of the studied nurses had either good or satisfactory knowledge score about infection and UPS, while they had satisfactory and unsatisfactory practice score.* ***It is to be recommended that****: 1) Develop an infection control precautions protocol for hemodialysis procedures should be done. 2) Continuous nurses' educations about infection and UPS should be mandatory. 3) Maintain adequate supplies, equipments and facilities to encourage the nurses to comply with the principles of UPS.*

Introduction:

Chronic Renal Failure (CRF) is a major health problem and is considered as the most common chronic disease of childhood. ***(Siegler 2001)***. Worldwide, 30 people in every 100.000 develop kidney failure each year. In pediatric population the annual rate is only 1 or 2 cases in every 100.000 children. In other words, adults are about 20 times more likely to develop kidney failure than children.**(*Ministry of health Report., 1999., & O' Tool & Miller(2002).***

In Egypt, as reported by the Ministry of Health 1999, the number of end stage CRF children on regular dialysis was around 3000 at the end of 1999. ***(Rice and Nelson, 2005)***. Infection control is critically important to the effective provision and management of health care services. ***(Pugliese 1997)***.

Blood borne diseases (BBDS) are microorganisms in the blood and other body fluids that can cause illness and disease. Microorganisms can be transmitted in children through contaminated blood, infectious

materials, urine, cerebrospinal fluid, saliva, tears and vomit ***(Pawinska and Dzierzanowska, 2002., & Moloney–Harmon 2005).***

There are three basic modes of transmission of infection mainly, parenteral, sexual and vertical transmission.***(Neff, 2004).*** Parenteral transmission was through contaminated medical instruments, direct contact with blood or blood products transfusion during invasive procedures and this is the common method of transmission in hemodialysis unit. ***(Neff, 2004,& CDC, 2001)*** Sexual contact is an important means of transmission for viral hepatitis and HIV infection. As regards to vertical transmission it is through infected mother to her fetus prenatal. ***(CDC, 2001).***

The Centers for Disease Control (CDC) and occupational safety health administration recommended work practices to prevent transmission of BBDs & nosocomial transmission known as universal precautions. Universal precautions constitute a system of infection control precautions that assumes the contact with blood or blood tinged body fluids has the potential for infecting exposed patient and health worker by BBDs. The measures of UPS include proper hand washing technique, use of protective barriers such as gloves, gown, musk, eye wear protection, over head and over shoes. As well as management of disposal of needles & sharp objects, sterilization, isolation practices & hygienic disposal medical waste & handling of contaminated linen. ***(CDC, 2001., & Macqueen,2005).***

Development of an infection occurs in a cycle that depends on the presence of all the following elements, an infectious agent, a reservoir, a portal of exit from the reservoir, a mode of transmission, a portal of entry to a host and a susceptible host. An infection will develop if this chain remains intact, so if the nurses follow UPS the chain will not develop. ***(Moloney – Harmon, 2005., & CDC,2006).***

High risk person whom susceptible to infection are extreme in age as very old or very young, dysfunction immune system, very ill and experiencing high level of stress all these characteristics are found among children who have CRF and managed by hemodialysis. ***(CDC, 2006).***

Nurses are the key members in helping the ureic children. They must provide care for children with CRF who undergoing hemodialysis as monitor for signs and symptoms of infection, use aseptic techniques when

cannulating access and offer comfort measures such as ordered analgesics. ***(Siegel, 2002., Gutch, et al 2003, Saxena, 2003, & CDC, 2006)***

So, the nurses at hemodialysis unit have a great role to reduce the risk of exposure to infection as well as to prevent the spread of infection through compliance with UPS during hemodialysis procedure.

Therefore this study aims to assess the universal infection control precautions followed by nurses at pediatric hemodialysis unit.

Research design: This is a descriptive study to identify nurses' knowledge and practice regarding hemodialysis.

Material & Methods

I. Material:-

Setting:- The study was carried out at pediatric hemodialysis unit in Zagazig University Hospital.

Sample:- Fifty hemodialytic procedures which were done by nurses.

Subjects:- All nurses who were actually involved in the procedure comprised the sample.

Tools:- Two tools were be used to collect the data.

- Tool 1 – A Structured interview questionnaire sheet.
- Tool 2 – A Structured observational check list.

Tool (1) A Structured interview questionnaire sheet was designed by the researcher and consists of two parts to collect the following data:-

- **Part 1**: Biosocial data of nurses such as age, educational level, years of experiences and any previous training program about UPS.
- **Part 2**: Nurses knowledge about causes of infection, methods of transmission, infection's manifestations and UPS.

Scoring for nurses' knowledge:

Total score of nurses' knowledge about infection and UPS was 30 points; each right answer took one point and zero if wrong. The score classified as following:

- Unsatisfactory > 10
- Satisfactory 10 – 19
- Good 20 – 30

Tool (2): A Structured observational check list was developed which included the following procedures: hand scrubbing, wearing gowns, wearing mask, wearing gloves, hand washing after glove removal and

between patients, changing the gloves between the patients, Disposing of unrecapped needles & sharp instruments, use of sterilized instruments, disinfecting the hemodylatic machine, as well as present of container for dirty articles and eating food in the work place.

Scoring for nurses' practice:

Total score of nurses' practice was 43 points divided as follows:
Hand scrubbing took 14 points, wearing gowns before dealing with patient took 4 points, wearing mask took 4 points, wearing gloves before dealing with patient took 7 points. In addition hand washing after glove removal, changing the gloves between the patients, disposing of unrecapped needles, using sterilized instruments, disinfecting the hemodialysis machine, present of container for wastes and not eating in the work place, each items of these steps took 2 points if done and zero if not done. Total nurses' practice was classified as follows:

- Unsatisfactory > 14
- Satisfactory 14 – 28
- Good 29 – 43

II. Methods:

- Data was collected over a period of three months, starting from February to April 2006.
- All subjects were acquainted with the aim of the study.
- Each nurse was interviewed individually to collect the necessary data using tool "1".
- Each nurse was observed during the hemodialysis procedure to evaluate their performance beginning from hand scrubbing in admission tell the end of the procedure using tool "2".

Data analysis:

The collected data were revised, coded and fed to a fox pro program data base. Data was then transferred to the SPSS program for statistical analysis which included frequency, percentage, mean, SD, fisher's exact test to determine the significance of the association. Also multiple linear regressions was done using each of knowledge score and practice score as dependent variables to find out the significant independent variables affecting them.

Results:

Table (I) illustrates the socio demographic characteristics of the studied nurses. Sixty percent of them were at the age of 25 years and above with mean age 25.5 ±2.582. Half of the sample had diploma nursing education (nurses), and 40% bachelor of nursing (intern), as well as 10% had secondary technical nursing education (hakima).

Sixty percents of nurses had 5 – 9 years of experience. On the other hand 70% of the studied nurses did not have any training program about universal precaution.
Concerning nurses' knowledge about infection and universal precautions, it was found that all nurses knew bacteria & virus as a causative organism of infection, while 80% of them mentioned protozoa as a cause of infection as shown in **table II.**

Regarding methods of transmission, it was found that all nurses (100%) mentioned respiratory system, blood, body fluids, needles, invasive instrument and the use of other's personal articles as methods of transmission of infection. On the other hand kissing, sexual relation and flies were mentioned only by 50%, 20% & 10% respectively.

When nurses were asked about manifestations' of infection, all nurses (100%) stated the increase in body temperature, wound infection and redness, swelling and pain as manifestations of infection. Purulent drainage & bruising around shunt were mentioned by 60% of nurses for each as illustrated in **table II**.

As regards the risk persons who are liable to infection, it was found that 80% of nurses reported person with low immunity, while extreme in age and very ill person (50% for each) as high risk persons.

The majority of universal precautions were known by all nurses (100%) such as hand washing, wearing gown, wearing mask, wearing gloves, using sterilized instrument and disinfection the machine. While disposing of unrecapped needless & throwing wastes in special container were mentioned by 80% of nurses for each respectively. Changing gloves between patients were reported by 50% of nurses and only 30% stated no eating food in the work place as illustrated in **table III**.

Concerning nurses' knowledge score, it was found that 60% of the studied nurses had satisfactory knowledge and 40% had good knowledge. On the other hand there were any nurses had unsatisfactory knowledge score as shown in **figure I**

The knowledge score was used as a dependent variable in a multiple linear regression equation with age, experience and previous training program as independent variables. Only age & experience had a significant effect on the knowledge score as shown in **table IV**

Figure II Illustrates the number of procedures by performer. It is clear from the figure that 54% of the fifty hemodialytic procedures were carried out by interns, 40% by nurses and 6% by hakima.

Table V Portray the nurses' universal precautions performance during heamodialysis. None of nurses of all categories washed their hands on admission, were not wear gown & mask. On the other hand, the majorities of nurses' categories perform the following steps; wearing gloves, hand washing and changing gloves between patient as well as throw wastes in special container (84%, 72%, 82% and 90% respectively).

In addition all nurses in all categories (100%) disposed recapped needles, used sterilized instrument and disinfect the machine. Meanwhile hakimas & nurses (33.3% &, 40% respectively) compared to none of interns were eating in the work place

Table VI Illustrates the total nurses' practice score; it was found that all nurses (100%) had unsatisfactory score compared to 66.7% of hakima and 18.5% of intern.

It was observed that the majority of intern (81.5%) had satisfactory score compared to 33.3% of hakima and none of nurses. On the other hand, it was found that none of the studied nurses' categories had good practice score.

The practice score was used as a dependent variable in a multiple linear regression equation with age, experience and previous training program as independent variables. Only age & experience had a significant effect on the practice score as shown in **table VII.**

Discussion:

Chronic renal failure is a complete and irreversible loss of kidney function. It is a permanent disorder that requires dialysis or kidney transplantation under restricted universal precautions (UPS) to sustain life. So, UPS include correct application of standard precautions which should be carried out. In addition, it is important to have adequate nursing staff who are well equipped to care for these patients in hemodialysis unit to prevent transmission of infectious agents. ***(Rac, Brown, and Calder, 1992)***.

The results of this study revealed that nurses who were working in hemodialysis unit had knowledge in most of the items of infection and universal precautions. These results are documented by their good score knowledge as they had either good or satisfactory knowledge score. The good and satisfactory knowledge score that the majority of nurses had in this study were related to the fact that the majority of nurses were recently graduated, so they still remember what had been studied. These results were in agreement with a study done in Canada 1992 ***(Rafat, 2005).*** On registered nurses working in acute care setting indicated moderate scores for general knowledge of UPS. Also these results were in concurrent with a study done by Rafate 2005 ***(Mandil, 2001).*** in Alexandria where she found in her study that the studied sample had either good or satisfactory knowledge score about UPS.

The studied nurses only lacked knowledge about sexual relation, flies and kissing as methods of infection transmission. This could be explained in the light of the fact that they are caring for children who are not exposed to such relation in their young age; in addition, they may concentrate on renal failure that never occurs from such methods.

This result was supported by the study done in Saudi Arabia 2001 ***(Shaaban&Bakr 1990)*** who found that most nurses had poor knowledge score concerning BBDs. In addition, other study done in Tanta and Assiute 1990 ***(Kim, et al 1999)*** among nurses who showed also low knowledge score about BBDs.

The results of the present study revealed that although all studied nurses had either good or satisfactory knowledge score, none of them had good score in their practice. This result may be attributed to many factors as unavailability of standard precaution protocol for hemodialysis procedures in the unit. Also the inadequate facilities such as gowns, masks and brushes which were used in infection control, as well as the majority of the studied nurses did not attend any in-service educational program regarding UPS.

As regards to the studied nurses' performance during hemodialysis, it was found that none of nurses of all categories scrubbed their hands on admission, did not wear gown & mask. These results may be due to insufficient equipment to be used in the unit, or they may not have the enough time on admission to make these procedures before starting hemodialysis. In addition, there may be a result of improper administrative nursing supervision. Also nurses may be consider hand

washing between patient was enough as all of them perform this step as shown in the result.

When nurses were observed during the hemodialysis, it was found that the majority of nurses wore gloves, washed their hands and changed gloves between patient as well as throw wastes in special container. This result may be due to the fact that these steps were routinely done, easy in their performance and need no time.

The result of this study revealed that all the studied nurses recapped needles, used sterilized instruments and disinfected the hemodialysis machine. This may be a result of the availability of the special equipment which was used to perform these procedures and they were mandatory done in the unit as a standardized procedure steps.

As regards to the nurses' performance score it was found in this study that none of nurses' categories had good practice score, while the majority of them had satisfactory practice score. It was observed also that the intern nurses were better in their performance than the nurse and hakima, where the majority of them had satisfactory score, while the majority of hakimas and all nurses had unsatisfactory performance. This result because the intern nurses were recently graduated and may be enthusiastic in their work. In addition, they were still under training, so they were carry most of the work in the unit. Also may be the other nursing staff busy by the administrate work and relay on the intern in carrying out the procedure.

These results were supported by many studied done regarding UPS. In a study done at Washington 1999 ***(Santana, 1992).*** They found that the health care workers (HCWs) under used protective equipment during their work in emergency department. In addition poor practice of UPS among HCWs was also showed in a study done in Manila and Philippines ***(Chan, et al, 2002).***

Saxena and Panhotra, (2004)., & Kline, (2005) go in line with the present study who found that nurses were under used protective equipment during their work in ICU.

Poor practice and quality patient care were also shown in a study done by ***Lois, et al (2004)., & Kline, (2005)*** and who go in line with result of this study.

Conclusion:

It could be concluded from the previous results that the majority of the studied nurses had good and satisfactory knowledge score about infection & UPS, while they had satisfactory and unsatisfactory practice score. None of them had good practice score.

Recommendations:

Based on the previous findings and conclusion of the present study, the following are recommended:

1) Develop an infection control precaution protocol for hemodialysis procedure should be done.
2) Orientation program for nurses who will be newly joined the hemodialysis unit.
3) Continuous nurses' educations about infection and UPS should be mandatory.
4) Design updated infection control manual which includes polices & procedures prescribed in details the hemodialysis procedures and UPS.
5) Maintain adequate supplies, equipments and facilities to encourage the nurses to comply with the principles of UPS.
6) Providing adequate head nurse supervision guidance and regular feed back to nurses about their performance to improve UPS applicable skills.

Table (I): **Biosocial characteristics of the studied nurses**

characteristics	No (10)	%
Age (in years) :		
20 – 24	4	40
25 +	6	60
Mean & SD	25.5 ±2.582	
Educational level:		
Secondary technical Ng	1	10
Diploma technical Ng	5	50
Bachelor degree Ng	4	40
Nurses' categories:		
Hakima	1	10
Nurse	5	50
Intern	4	40
Experience:		
< 5 y	4	40
5 – 9 y	6	60
Mean & SD	5.5 ±2.582	
Previous training:		
Yes	3	30
No	7	70

Table (II): Nurses' knowledge about infection

Items	No (10)	%
1- Causative organism *		
-Bacteria	10	100
-Virus	10	100
-Protozoa	8	80
2- Methods of transmission*		
-Respiratory system	10	100
-Blood	10	100
-Body fluids	10	100
-Needles	10	100
-Invasive instrument	10	100
-Sexual relation	2	20
-Flies	1	10
-Kissing	5	50
-Use of other's personal articles	10	100
3- Manifestation of infection*		
- ↑ Temperature	10	100
-Wound infection	10	100
-Redness, swelling & pain	10	100
-Purulent drainage	6	60
-Bruising around shunt	6	60
4- High risk persons*		
-Extreme in age	5	50
-Child with low immunity	8	80
-Very ill child	5	50

*More than one answer

Table (III): Nurses knowledge about universal precautions

Nurses knowledge	No	%
Universal precautions*		
- Hand washing on admission	10	100
- Wearing gown before dealing with PT	10	100
- Wearing mask before dealing with PT	10	100
- Wearing gloves before dealing with PT	10	100
- Using sterilized instrument	10	100
- Disposing of unrecapped needless	8	80
- Disinfection the machine	10	100
- No eating food in the work place	3	30
- Container for wastes	8	80
- Changing the gloves between PT	5	50
- Hand washing after glove removal	7	70

*More than one answer

Figure (I): Total nurses knowledge score about infection and universal precaution

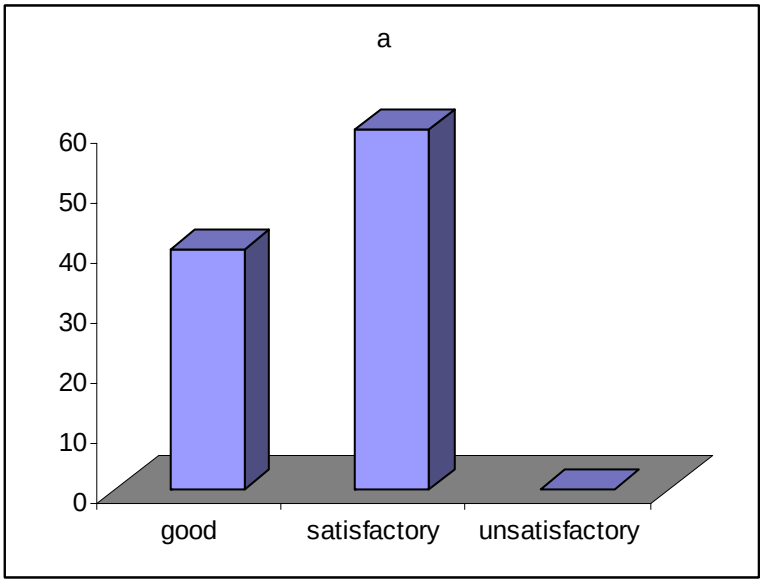

Table (IV): Regression between the knowledge score of nurses and their age, experience and previous training program

Model	Unstandardized coefficients		standardized coefficients	t	Sig.	F	Sig.
	B	Std. Error	Beta				
Age	1.389	.216	1.217	6.443	.000	27.422	.000
Exp.	-1.770	.197	-1.543	**-8.965**	.000		
Previous training program	-1.299	2.132	-.068	-.609	.545		

Figure (II): Numbers of procedures by performer.

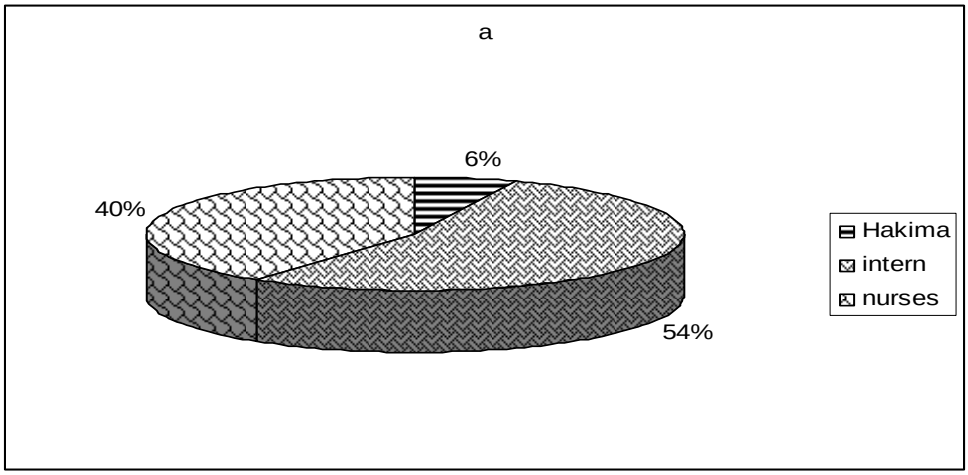

Table (V): Nurses' universal precautions performance during heamodialysis

Check list items	Hakima (3)		Nurse (20)		Intern (27)		Total (50)		FET*
	No	%	No	%	No	%	No	%	
-Hand scrubbing on admission	0	0	0	0	0	0	0	0	
-Wearing gown	0	0	0	0	0	0	0	0	
-Wearing mask	0	0	0	0	0	0	0	0	
-Wearing gloves	2	66.7	15	75	25	92.6	42	84.0	3.112 (0.186)
-Hand washing between pt	1	33.3	10	50	25	92.6	36	72.0	12.71 (0.002)*
-Changing the gloves between pt	1	33.3	15	75	25	92.6	41	82.0	7.53 (0.023)*
-Disposing of needles	3	100	20	100	27	100	50	100	
-Using sterilized instrument	3	100	20	100	27	100	50	100	
-Disinfecting the machine	3	100	20	100	27	100	50	100	
-Eating in the work area	1	33.3	8	40	0	0	9	18.0	12.96 (0.002)*
-Discard wastes in special Container	2	66.7	18	90	25	92.6	45	90	2.018 (0.365)

**The result was statistically sign.*
#Test used was Fisher's exact test.

Table (VI): Total nurses' practice score

Total practice score	Hakima		Nurse		Intern		Total	
	No (3)	%	No (20)	%	No (27)	%	No	%
Unsatisfactory > 14	2	66.7	20	100	5	18.5	27	54
Satisfactory 14 – 28	1	33.3	0	0	22	81.5	23	46
Good 29 – 43	0	0	0	0	0	0	0	0

Table (VII): Regression between the practice score of nurses and their age, experiences and previous training program

Model	Unstandardized coefficients		standardized coefficients	T	Sig.	F	Sig.
	B	Std. Error	Beta				
Age	.967	.117	1.401	8.378	.000	39.186	.000
Exp.	-1.155	.107	-1.649	-10.825	.000		
Previous training program	.639	1.152	.055	.554	.582		

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الملخص العربي

التعرف على الاحتياطات العامه المتبعة للتحكم فى العدوى بواسطة الممرضات فى وحدة الغسيل الكلوى للاطفال

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الملخص :

الفشل الكلوى المزمن فى مرحلة الطفولة يعتبر دورة حياة طويلة من المرض مع التقدم من خلال الغسيل الكلوى وزرع الكلية تحت اجراءات الاحتياطات العامة المتبعة للتحكم فى العدوى **ولذلك تهدف هذه الدراسة** الى تقييم الاحتياطات العامة للتحكم فى العدوى المتبعة بواسطة الممرضات فى وحدة الغسيل الكلوى للاطفال. **اشتملت هذه الدراسة** على كل الممرضات اللاتى اشتركن فى اجراء ٥٠ عملية غسيل كلوى وكان عددهن ١٠ ممرضات. **وقد تم استخدام اداتان** لجمع المعلومات اللازمة من الممرضات. استمارة استبيان مقابلة شخصية واستمارة تقييم ملاحظة للممارسة العملية للممرضات. **اسفرت نتائج هذه الدراسة** ان اغلبية الممرضات عينة الدراسة قد حصلن على تقييم جيد وكافى فى معلوماتهم عن العدوى والاحتياطات المتبعة للتحكم فى العدوى بينما حصلن على تقييم كافى وغير كافى فى الممارسة العملية. **وقد اوصى بالتالى** : ١) يجب ان يصمم بروتوكول عن التحكم فى العدوى لعملية الغسيل الكلوى. ٢) يجب ان يكون التعليم المستمر للممرضات عن العدوى والاحتياطات المتبعة للتحكم فى العدوى الزامياً. ٣) يجب توفير الاجهزة والادوات والمستلزمات اللازمة لتشجيع الممرضات للامتثال الى مبادىء الاحتياطات العامة المتبعة للتحكم فى العدوى.

A Key to Management Productivity: Delegation

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Abstract

Delegation is at the heart of management—it is getting work done and meeting goals through others. It is about developing trust and empowering employees. Effective delegation increases productivity as well as production capacity ***(Burns, 2001).*** *Delegation cannot be viewed as an abstract technique; it depends on individuals and individual needs* ***(Blair, 2003).***

In this context, a non-experimental ex post facto or correlation design study was used to investigate how delegation was being performed by nurse managers (head nurses) at two different settings (Elshohada Hospital and Quesna Hospital at Al Minufiyah Governorate of Egypt). A second purpose of the study was to identify the effect that delegation had on head nurses' productivity. A convincing sample of 35 head nurses working in different units in the two hospitals was included in the study. Data were collected by two tools. The first tool was a two-part questionnaire. Part I included demographic characteristics of the sample size, such as age, education, and years of experience. Part II consisted of 18 statements, translated into Arabic, aimed at assessing the degree of work delegation by respondents. The second tool measured professional productivity by means of efficacy, effectiveness, and efficiency categories ***(Curtin, 1984).*** *The study concluded that the majority of respondents understood and correctly used delegation. In addition, there was statistically significant correlation between delegation and nurse managers' productivity. Recommendations were made in light of these findings.*

Introduction

Delegation is a skill many persons heard about it but with few understands. It can be used either as an excuse for dumping failure onto the shoulders of subordinates, or as a dynamic tool for motivating and training team to realize its full potential. Delegation means sharing responsibility for the achievement of a specific task with someone else. Nurse manager, however, remains ultimately accountable, and the delegated person makes decisions and acts independently - under nurse manager guidance, not control. There is a big difference between

delegation and dumping. Delegation allows nurse managers to achieve productivity through the proper selection, assignment, and coordination of tasks and resources ***(Yates, 2002).***

***Habgood (2000*)** states that the generally recognized definition of nursing delegation is entrusting the performance of a selected nursing task to an individual who is qualified, competent, and able to perform such tasks. Nurse managers remain responsible for any and all delegated tasks. Effective delegation involves achieving the correct balance between effective controls of work and allowing others to proceed with jobs in their own way. Inappropriate delegation may lead to liability claims against the nurse and disciplinary action by managers.

Blair (2001) points out that one of the main phobias about delegation is that by giving authority to others, the manager loses control. This need not be the case. If nurse managers train staff to apply the same criteria (by example and full explanations), then they will be exercising control on nurse managers behalf. Since the staff will witness many more situations over which control may be exercised, the key is to delegate gradually. In the beginning, delegate a small task leading to a little development, then another small task which builds upon the first; when that is achieved, add another stage, and so on. Each task delegated should have enough complexity to stretch that member of staff.

Kloser (2004) emphasizes that the best way to delegate is to give subordinates all the information needed to be successful. Cover the details and instruct subordinates on how they can best support managers and what a desirable end result to be. If managers are vague in what they ask for, they will likely be disappointed. Managers should be specific then let it go and let them do what they asked for. Managers should be willing to redirect the subordinates if they find them off track and not following through. As well as they should be truthful and ask subordinates about their needs to be motivated and successful.

Culp & Smith (1997) mention that a key aspect of leadership is delegation. Unless managers delegate tasks to subordinates, their team will become inefficient and demoralized. Positive aspects of delegation include higher efficiency and effectiveness, increased motivation of subordinates, development of team skills, and better distribution of work throughout the group.

Watson (2003) asserts that delegation is not an instinctive reaction for most human beings. Even so, effective managers recognize the

importance of delegation—both for the sake of their own success as leaders and for the overall health of team members. They learn how to determine what should and should not be delegated, and what it will take to help staff be successful at delegated tasks.

Puetz & Thomas (1998) advise that as a nurse manager evaluating the subordinates' performance, don't give low marks just because they didn't do the job the same way the manager would have. Praise them if it was completed correctly. As managers gain trust and learn the strengths of their staff, they can increase the difficulty of the tasks for delegation. ***The Japan Council's Action Program (2003-2004)*** insists that most of all, encouragement and innovation are required for work improvement.

Productivity is a great challenge facing management everywhere. Improving output has long been emphasized by managers since the beginning of management as a discipline. It makes no difference whether the output is goods or services. Productivity is a measure of individual or organizational performance ***(Marquis & Huston, 2000).***

Productivity is also a significant indicator of professional development within a professional group, including nurses. The most important factor affecting productivity has been identified as the human resource element. ***Moody (2004)*** states that nurse are the largest human resource element of health care systems, and play a major role in providing ongoing, high-quality care to patients.

Smith (2001) provides a clear definition of productivity as the ratio of output to input or as the relationship between input and output. Nursing productivity in particular was defined as: equilibrium between demand for and supply of services; managing cost structure of a system by integration of financial and clinical processes; and providing good care in a cost-effective manner. ***Holcomb (2002)*** views nurse productivity as the ratio of output produced to resources consumed, and proposes that nurse productivity can be measured at the hospital unit, department or division levels.

Regarding organizational success, ***Eastaugh (2002)*** finds that in most health care organizations, nurses are the largest work group and play a major role in the organization's success. Hence, nurses' productivity affects an organization's success by influencing the organizational total factor productivity.

Blanchard, et al. (2001) & Nelson (2001) describe delegation as entrusting another person with sufficient power and authority to get the

work done or act on the manager's behalf. To delegate effectively, the manager must assign a task or responsibility and give the employee sufficient authority to complete the assignment. The employee then becomes accountable for completion of the assignment. A manager may overcome barriers to delegation and excuses for failure to delegate by self-examination and "just trying it" again and again. Effective delegation increases productivity.

The aim of this study is to:

1 - Investigate to what extent delegation was being performed by nurse managers (head nurses).
2 - Identify the effect of delegation of work on head nurses' productivity.

Subjects and Methods

Design: -

Non-experimental ex post facto or correlation research design was used in this study. The literal translation of the Latin term *ex post facto* is "from after the fact." This expression is meant to indicate that the research in question was conducted after the variations in the independent variable had been accrued in the natural course of events. Ex post facto research attempts to understand relationships among phenomena as they naturally occur without any researcher intervention ***(Polit & Hungler, 1999).***

Variables: -

The independent variable in this study is the delegation of work by the head nurses (nurse managers) to the subordinates. The dependent variable is productivity.

The following demographic characteristics of the nurse managers were collected: (a) age, (b) educational qualifications, (c) years of experience, and (d) hospital. These demographics were used to describe the sample of nurse managers.

Settings: -

The study was conducted at two settings: (1) Elshohada Hospital, and (2) Quesna Hospital, both in the Al Menoufiya Governorate of Egypt. The hospitals serve all specialties.

Subjects: -

A non-probability, convenience sample was used to select the study subjects from the above-mentioned hospitals. It consisted of all nurse managers (head nurses) who were available at the time of this study. The

total number was 35 nurse managers with varied years of experience but with not less than one year of experience.

Instrumentation

Two tools were used for data collection:

1. Professional Productivity. Developed by ***Curtine (1884),*** this tool was designed to measure professional productivity by means of three measures: efficacy, effectiveness, & efficiency. Efficacy is the power to produce an effect; effectiveness is the ability to accomplish a purpose; efficiency is the capacity to produce the desired result with a minimum expenditure of energy, time, money, or materials in applying knowledge. The measures of effectiveness and efficiency were determined by checking items with a "yes" or "no" response. Productivity of nurse managers (head nurses) was determined by using the mean number of all observations for each manager

2. Questionnaire Sheet aimed at assessing the degree of delegation by the respondents. This two-part tool was developed and applied by Principal Investigator ***Abd-Elkhalk (2000)*** at Ain Shams University. The first part is aimed at collecting data from respondents about their personal characteristics, such as age. The second part consists of 18 statements with five possible responses and corresponding points: strongly agree (5), agree (4), indifferent (3), disagree (2), and strongly disagree (1). The scoring system was as follows:

56- 90 Respondents do not delegate correctly (never delegate).

37- 55 Respondents often delegate properly, but there is room for improvement (sometimes delegate).

18-36 Respondents understand and correctly use delegation (always delegate).

Procedure

Protection of Human Subjects

A formal letter of introduction was issued from the nursing college at Minufiya University to obtain approval from the hospital's administration to conduct the study. The letter contained the study's title, aim, and methods of data collection. Data collection procedures, analysis, and reporting of the findings were undertaken in a manner designed to protect the confidentiality of subjects. Permission to conduct the study was given by the hospital's administration.

Data Analysis Plan

Descriptive statistics were used to summarize demographic characteristics of the nurse managers and to give an overview of scores on the two instruments. Inferential statistical tests were used to

investigate the correlation of delegation and professional productivity among the subjects. Data were analyzed using SPSS version 11.

Results

Table 1 provides an overview of the demographic characteristics of nurse managers in the sample, including age, years of experience, and place of work. The majority of the sample was 26-30 years of age. Subjects were divided into two groups according to experience, with the majority (68.57%) having had 5-10 years of nursing experience. Quesna Hospital was the workplace for the majority (75.14%) of the sample.

Table 2 illustrates the frequency and percentage distribution of efficacy among nurse managers relative to education. The highest percentages were those with 5 or more years of formal nursing education (94.29%); those holding a bachelor's degree in nursing (94.29%); and those reporting no evidence of continuing education or skill development (65.71%).

In Table 3, which details effectiveness and efficiency, an overwhelming majority of nurse managers recorded positive responses. Regarding effectiveness, over 91% demonstrated the ability to execute job-related procedures; 88.57% recorded appropriate information clearly and concisely and worked cooperatively with others; 77.14% correctly prioritized activities; and 74.29% performed according to standards. High percentages were also returned in efficiency items: promptness, reliability, and precision (85.71%); attendance (77.14%); adaptability (74.29%); and economical disposition of resources (71.43%).

Table 4, displays the results of respondents' delegation scores. A large majority (85.71%) of the nurse managers scored in the range of 18-36, indicating they understood and correctly used delegation. The remainder of the sample (14.29%) scored 37-55, indicating they sometimes delegate.

Table 5 shows a highly significant correlation between delegation and effectiveness ($p = .004$). It also shows a highly significant correlation between delegation and productivity ($p = .008$).

The results were analyzed to determine if there was a difference between the two hospitals (place of work) in relation to productivity, effectiveness, efficiency, and delegation score. Table 6 shows a slight difference in the mean and standard deviation between Elshohada and Quesna Hospitals.

Discussion and Conclusion

The present study revealed that a high percentage of subjects (nurse managers) were aged 26-30 years, had 5-10 years of nursing experience, and held a bachelor's degree in nursing. The high number of degreed respondents can be explained by the fact that most nurse managers hired by hospitals are college graduates. This qualification is addressed by the ***American Hospital Association (1989*)**, which points out that most hospitals require highly educated nurses, resulting in a greater effect on patient outcomes. The majority of respondents, however, reported no evidence of continuing education or staff development. This could be related to hospital policies which do not consider this item in the recruitment process. In the light of the study results, ***Lynn (1999)*** states that teaching strategies are explicated for staff development of nurse managers who are charged with providing substantive leadership approaches for staff and management nurses in the practice setting. ***Tomoum (2001)*** reports that certain demographic characteristics of nurses, such as age, education, and qualifications, can influence their readiness to accept new ideas and experiences, helping them to achieve work goals and desired results.

The majority of nurse manager respondents were shown to have effectiveness and efficiency productivity in their work. ***Accel–Team (2005)*** stresses the importance of effectiveness as a vital dimension in improving performance. Failure to take it into account can lead to a false assessment of true performance. In addition, efficiency is an important consideration when evaluating the productivity ratio. Nurse managers may find it a useful indicator in their efforts to improve productivity.

Nayeri, et al. (2005*)** indicates that human resource issues are the most important factor in promoting or impeding productivity. They suggest that the factors influencing efficiency and effectiveness of human resource elements include: systematic evaluation of staff numbers; a sound selection process based on verifiable criteria; provision of an adequate staffing level throughout the year; full involvement of the ward sister in the process of admitting patients; and sound communication within the care team. Paying attention to these factors creates a suitable background for improved productivity and decreases negative impacts, whereas ignoring or interfering with them results in a lowering of nurses' productivity. ***Tenner (1996) cited in ***Katz (1997)*** puts a greater emphasis on information technology and workspace flexibility in improving worker productivity and effectiveness. It is important to be able to quantify the improvements brought about by new technologies, in information or

building technology, and to include the effects on healthcare in this evaluation.

In contradiction to the findings of this study, ***O'Brien-Pallas, et al. (2004)*** indicates that the nursing productivity utilization level should be kept at 85% (+/- 5%). According to their research, when the productivity level rises above 80%, costs increase and quality of care decreases. When kept below 80%, patient care is likely to be improved, nurses are more likely to be satisfied with their jobs, and absenteeism is reduced.

The present study revealed that the majority of nurse managers understand and correctly use delegation. This finding is in accordance with ***Ward & MacPhail-Wilcox (1999)*****,** who emphasize that delegation is a key part of being a good manager. To be successful, a manager needs to demonstrate the ability to understand broad goals and objectives for the staff, then determine what it will take to achieve them. This will most often involve relinquishing specific tasks and responsibilities to others so that the manager can spend more time supervising team members and enriching their skills, thereby keeping morale high. Delegation is much more than a nice thing to do—it is an essential thing to do.

Barter (2002) stated that successful managers exude certain competencies that enhance patient care, including the ability to teach, coach, and foster effective delegation strategies. As healthcare systems continue to implement major changes to improve patient care in a cost-effective manner without compromising quality, managers may feel pressured by these changes. Delegation strategies can assist managers to function more effectively and efficiently.

Sheehan (2001) adds that nurse managers must supervise their staff while they are performing delegated tasks to ensure adequate resources to support, direct, and evaluate the activities. ***Ahmed (2000) and Cohen (2000)*** emphasize the importance of managers following up on assigned tasks, since it is the nurse manager who is held accountable if the task is not completed or done properly.

Tyme (2005) reports that poor or no delegation is inefficient and expensive. By not delegating work, nurse managers lose wonderful training opportunities for their staff. Delegating can be hard work, but it is work that is needed to help an organization grow and improve.

There are two primary benefits to delegating: 1) it gets the job done more efficiently; and 2) it provides training and new experiences for staff

members. Delegation can result in mistakes being made, but mistakes can also be learning opportunities. Praise should be given for a job well done. Each time delegation occurs, there is an opportunity for everyone to improve their work efficiency and effectiveness.

The present study revealed a statistically significant correlation between delegation and productivity. This finding is consistent with ***Mancall (2000),*** who asserts that delegation is the best productivity skill a manager can master. ***Levoy (2005),*** writing about optometry, agrees that effective delegation is undoubtedly the strongest productivity-improvement tool available in his field.

Effective delegation reduces a manager's workload while developing employees' skills, knowledge, job satisfaction, and organizational commitment. The ability to delegate prepares subordinates to handle their manager's responsibilities and simultaneously enables everyone to increase work productivity and efficiency. Delegating is a win-win activity.

Gazda (2001) reports that by sharing responsibilities, managers can focus on doing a few tasks well, rather than many things less effectively. As a result, they increase their management and leadership potential while training others to succeed them. For the organization, delegation increases productivity and opens up new lines of communication. It engages employees and encourages them to speak up and offer ideas to improve the work process. It improves overall decision-making, which lets the organization become more responsive - a real competitive advantage in today's marketplace.

In conclusion, the findings of this study: 1) indicate that the majority of the subjects understand and correctly use delegation; and 2) demonstrate a statistically significant correlation between delegation and nurse managers' productivity.

Recommendations

1. This study was conducted in two hospitals in one governorate of Egypt. In order to be generalized to a much larger population, the study needs to be conducted in larger hospital sectors.
2. Those who have the experience and self-confidence to delegate comfortably need to be role models for less-experienced nurses as they gain confidence in their ability to delegate tasks.
3. There are several indicators which should be considered by nurse managers when evaluating if delegating is being performed

successfully. These include confidence level among staff, updated job descriptions, and an annual staff competency process.

4. Nurse managers should demonstrate concern for the human benefits of delegating beyond productivity, such as staff motivation, nurses' job satisfaction, improved morale, etc.
5. Nurse managers should ensure full involvement of staff nurses in making decisions concerning patient care, and sound communication within the care team. Paying close attention to these factors will help to create a positive environment for improved productivity.
6. Nursing services in different health care delivery systems should determine in advance an acceptable productivity standard.

Table 1: Distribution of Demographic Characteristics of Nurse

Items	F	%
Age		
20-25 years	11	31.43
26-30 years	18	51.43
31+ years	6	17.14
Nursing Experience		
1-4 years	11	31.43
5-10 years	24	68.57
Place of Work		
Elshohada Hospital	15	24.86
Quesna Hospital	20	75.14

Managers (Head Nurses) (N = 35)

Table 2: Frequency and Percentage Distribution of Efficacy (Productivity) Among Nurse Managers (Head Nurses) (N = 35)

Items	F	%
Years of Formal Nursing Education		
5+ years	33	94.29
3 years	2	5.71
Level of Academic Achievement		
B.Sc. in Nursing		
Diploma in Nursing	33	94.29
Evidence of Continuing Education & Skill Development	2	5.71
Yes	12	34.29
No	23	65.71

Table 3: Frequency and Percentage Distribution of Effectiveness and Efficiency (Productivity) Among Nurse Managers (Head Nurses)(N = 35)

Items	No		Yes	
	F	%	F	%
Effectiveness:				
• Demonstrate ability to execute job- related procedures	3	8.57	32	91.43
• Correctly prioritize activities	8	22.86	27	77.14
• Performance according to professional & legal standards	9	25.71	26	74.29
• Appropriate information clearly & concisely recorded & work cooperatively with others	4	11.43	31	88.57
Efficiency:				
• Promptness	5	14.29	30	85.71
• Attendance	8	22.86	27	77.14
• Reliability	5	14.29	30	85.71
• Precision	5	14.29	30	85.71
• Adaptability	9	25.71	26	74.29
• Economical disposition of resources	10	28.57	25	71.43

Table 4: Percentage Distribution of Delegation Score among Study Subjects. (N= 35)

Delegation Score	Frequency	%
Respondents sometimes delegate, with room for improvement (37-55)	5	14.29
Respondents understand & correctly use delegation (18-36)	30	85.71

Table 5: Correlation between Delegation, Effectiveness, Efficiency and Productivity

Delegation	Effectiveness	Efficiency	Productivity
R	.437**	.152	.404**
p-value	.004	.192	.008

Table 6: Mean & Standard Deviation of Delegation, Effectiveness, Efficiency and Productivity by Place of Work.

Items	Elshohada hospital (No=15)		Quesna hospital (No=20)	
	Mean	SD	Mean	SD
Delegation	31.60	4.12	31.70	4.67
Effectiveness	3.20	.86	3.40	.88
Efficiency	4.93	1.03	5.00	1.03
Productivity	8.13	1.36	8.40	1.32

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الملخص العربي

التفويض: كأسلوب لادارة الإنتاجية

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مقدمه :
يعتبر التفويض قلب الإدارة النابض وهو ما يعنى إنجاز الأعمال والوصول إلي الهدف وذلك من خلال الآخرين مع استمرار المشاركة في المسؤولية بين الممرضات ورئيستهم. من هذا المنطلق نجد أن التفويض يعطى مؤشرا لمدى كفاءة مشرفات التمريض في المستشفى لما له من مساهمة في رفع مستوى الإنتاجية التمريضية .

أهداف البحث :

١- فحص إلي أي مدى يقوم مشرفات التمريض بالمستشفى بالتفويض.
٢- تقييم تأثير التفويض على إنتاجية مشرفات التمريض .

خطة البحث :لتحقيق أهداف هذا البحث يتم إتباع الخطوات التالية :-

١. الحصول على موافقة من المستشفيات المختلفة لجمع البيانات اللازمة لهذه الدراسة .
٢. تم استخدام وسيلتين لجمع البيانات الخاصة بالتفويض والإنتاجية لدى مشرفات التمريض بالأقسام المختلفة وذلك تم في مستشفى الشهداء ومستشفى قوسينا .
٣. تم إجراء استبيان مع عدد ٣٥ مشرفة تمريض القائمات بالعمل بالمستشفيات السابق ذكرها، كما تم ملاحظة مشرفات التمريض لتحديد مدى إنتاجيتهن.
٤. تم عمل التحليل الإحصائي باستخدام برنامج (SPSS) .

نتائج البحث :أسفرت الدراسة عن النتائج التالية:-

الأغلبية العظمى لمشرفات التمريض التابعة لهذه الدراسات حاصلات على بكالوريوس التمريض وسنهم يتراوح من (٢٦-٣٠) سنه بالإضافة إلي تمتعهن بخبرات في مجال التمريض قد تصل إلي عشر سنوات.

وكانت نتيجة الاستبيان أن ٨٥,٧١% من مشرفات التمريض تفهم التفويض وتستخدمه بطريقه صحيحة .والنسبة المتبقية ١٤,٢٩% أحيانا تقوم بالتفويض. وحيث كانت نتيجة استمارة الاستبيان تعطى مؤشرا عاليا للإنتاجية بين مشرفات التمريض. وعند القيام بفحص العلاقة بين التفويض والإنتاجية وجد علاقة طردية بينهما (وذلك يعنى انه عند قيام مشرفات التمريض بفهم وتنفيذ التفويض بطريقه صحيحة يكون له تأثير إيجابي على زيادة إنتاجيتهم) وهذا التأثير له دلالة إحصائية عالية.

التوصيات :يوصى هذا البحث بالآتي :-

١. من اجل تعميم نتائج هذا البحث يجب استكمال الدراسة فيه ولكن خلال عدد كثير من المستشفيات .
٢. أن يعمل مشرفات التمريض على نقل خبراتهم في مجال التفويض إلي أولئك أصحاب الخبرات القليلة منهم.
٣. على مشرفات التمريض الآخذ في الاعتبار المؤثرات الأخرى على الإنتاجية ومنها التحفيز، الإشباع الوظيفي.....
٤. مشاركة الممرضات مع رئيستهم في اتخاذ القرارات الخاصة برعاية للمرضى مع الاتصال الجيد تكون بمثابة دعم جيد لزيادة الإنتاجية التمريضية .
٥. يجب أن يتوفر معيار لقياس الإنتاجية التمريضية وذلك في جميع مجالات الصحة.

The perception of women attending Tanta M.C.H. centers and private clinics about reproductive health promoting measures.

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Abstract

Subject and methods: Across -sectional descriptive study was used to assess pregnant women knowledge about different aspects of reproductive health promotion to identify the factors affecting women's health practices during pregnancy, and finally to plan health education proposal for women who needed to improve their knowledge and practice about reproductive health promotion aspects. The study was conducted at Tanta MCH and Elmenshawy private clinic during the year 2003 from the 1st of November. To the end of December. The sample consisted of two groups each 55 pregnant mothers attending the above mentioned setting during the period of the study. A questionnaire interview sheet was used to collect data and was composed of two parts ; part one contained personal data and obstetric history while part two consisted of data about healthy life style and practice of self examination .The results revealed a significant relation between educated and illiterate mothers in relation to all aspects of reproductive health promotion except their health behavior .The study recommended a health education proposal about reproductive health promotion measures to be applied on a large scale in nursing school, MCH and mass media to increase women's awareness about reproductive health promotion.

Introduction

Women's health and their status have attracted increasing attention in the past decade because women play a major role in the economic life of the family unit and thus in both process of economic development of community and society. Women's health is in distinct contrast to viewing women in terms of their reproductive health or their role in parenting children. Women's health recognizes that the health of women is related to the biological, social, and cultural dimensions of women's lives. Women health reflects both her individual biology and her socio-cultural, economic and physical environments. All three factors affect both the duration and the quality of life ***(WHO, 1998.)***

Health promotion is an essential component of community health care provided by nurses. Health promotion is defined as any program that targets healthy individuals to maintain or enhance their state of well-being by using community and individual approaches for healthy life style development ***(United Nation, 1995).*** The key components of a promoting healthy life style during pregnancy include appropriate weight gain , consumption of well balanced diet, appropriate and timely vitamin and mineral supplementation; avoidance of alcohol, tobacco, and other harmful substances; and safe food-handling ***(United Nation, 1995)***.

Although the WHO makes a distinction between prevention and health promotion, health education and prevention are seen as being integral components of health promotion ***(WHO, 1994)***. The ***WHO (2000)*** reported that in developing countries, there is 480 maternal deaths for every 100,000 live births. Maternal mortality continues to be the health indicator showing the greatest disparity between developed and developing countries. Recently revised WHO and UNICEF figures indicated that an estimated 90% of the 585,000 worldwide maternal deaths that occur each year take place in sub-Saharan Africa and Asia. In addition, for every woman who dies, an estimated 16-17 will suffer from pregnancy related complications ***(WHO, 2000).***

In Egypt, demographic and health survey (EDHS) (2000) reported that maternal mortality more than 80% of women are related to inappropriate health care during their child bearing life ***(Elzanaty, & Way, 2001).*** In Egypt, insufficient attention has been given to study programs for promoting women health during childbearing ***(Allan & Philips, 1997)***. Many studies determining certain health promotion aspects through out childbearing period help in reducing maternal mortality such as ***(Bopak, 1995., Lewis, 1996., Leifer, 1999)*** Promoting life style or healthy behaviors which include nutrition which varies according to person's age, sex and reproductive status, regular daily exercise which is important in preventing certain disorders such as, coronary artery disease , diabetes ,osteoporosis, constipation, sleep disorders ,premenstrual disorders. Regular exercise during pregnancy can help prevent weight gain, relieve backache, reduce tension, improve circulation and strengthen abdominal muscles ***(Ibrahim, 1998., and Mousa 2001)***

The practices of personal hygienic measures such as bathing, skin care, hair, mouth, eye, ears, nail care and perineal and genital areas. Many factors influence personal hygiene practices such as cultural background,

socioeconomic status, religion, personal habits, and health status ***(Ladwing, London, Olds 1998, and Kotex 2000)***. As regard menstrual healthy behavior; in Egypt it is believed that the menstruating women is vulnerable to physical and psychological stress, women don't wash their hair, or don't take a bath during menstruation. It is important that women should be taught to regard menstruation as a normal health function ***(Leahy, Kizilay, 1998 & WHO, 1999).***

Also family planning is the main rapid solution for the most common courses of maternal deaths due to complication of pregnancy and delivery such as hemorrhage and sepsis ***(Taylor, Lillis, & Lemone, 2001)***. Safe sex is that which affords no risk for disease transmission or injury, many factors influence attitude about sex as the home environment, cultural background, socioeconomic level and sexual experiences ***(WHO, 2001)***. Immunization of pregnant mother will receive tetanus vaccination ***(Unicef, 1991).***

Prevention of stress which can be physical such as the stress of exercise or the stress of a debilitating disease, as well as emotional or situational, such as the stress of high pressure, low freedom job or any event that can evoke frustration or, anger or anxiety ***(WHO, 2000).***Also smoking is the leading preventable cause of death for both women and child, if she is a negative or positive smoker. Smoking during pregnancy has been clearly linked to low birth weight in infants, miscarriage, stillbirth, and neonatal death, as well as various bleeding problems. Also, smoking seems to accelerate the onset of menopause, cervical cancer, osteoporosis and severe skin wrinkling ***(Abdalla, 1999, Elsherbiny, 2000., & Berta, 2001)***

Self care practices as breast self examination, vulvar and vaginal self examination are very important for women to detect any abnormalities and for prevention of disease ***(Allan & Philips, 1997)***. Also screening tests as mammography, pap- smear, pelvic examination, blood analysis (e.g. blood group , hemoglobin level, RH-factor antibody titer) and urine analysis for the early detection of diseases can save lives and eliminate unnecessary suffer***(Bopak, 1995., and Lewis, 1996).***

Community health nurse and midwives play important role by providing information and guidance to women throughout her life span on family planning, safe sexual practices and educating communities on the consequences of early marriage, early pregnancy, unsafe abortion, self-examination and safe environment.

Aim of the study:

This study aimed to:

1- Assess women's knowledge and practices about different health promotion aspects during pregnancy.
2- Identify factors affecting women's healthy practices during this period.
3- Propose health education program for women's who need improvement in their knowledge and perception about health promotion aspects

Material and Methods

Study design:

It is a cross-sectional descriptive study. It was conducted during the year 2003 from 1st of November to the end of December in Maternal and Children Health care center as a primary health care center and in Elmenshawy hospital as a private clinic at Tanta Governorate.

Sampling:

Criteria of subject selection:

The total sample of the study was 110 pregnant women:

1- Aged 15-49 years.
2- Medically free from chronic diseases
3- At least Para one, who accepted to participate in the study.

Pregnant women who received antenatal care in MCH center (55) were classified as group 1, while pregnant women receive ante natal care in private clinic(55) were classified as group 2.

Technical design:

1- A structured interview sheet was developed and used to collect the required data from pregnant women. It included two parts:

Part one: to collect personal as:

(Age, education, occupation, and obstetric history).

Part two: Aspects of health promotion which cover Healthy behaviors (lifestyle) as: Nutrition, exercise, personal hygiene, and care during menstruation, family planning, sexual health, immunization, stresses management and smoking.

2. b- Self examination practices as:

Breast self examination (BSE), genital self –examination, screening activities and safe environment.

Knowledge and perception of women's regarding reproductive health promoting aspects was collected using the following scoring system:

-Right and complete answer was scored 1, 2 or 3 according to the number of items in the question.

- Right and incomplete answers were given half of the above score.

-Wrong answers were scored (zero).

Score was considered as follows:

We constructed an arbitrary score of three levels:

- high perception level >75%
- Middle perception level 50-75%
- Low perception level <50%

Health education program:

A program was prepared as a proposal to be subjected for further evaluation & application in the future in order to improve women perception and in turn their practices

The statistical analysis of the results was computed using the SPSS

Results:

Table 1: Shows the distribution of women regarding their personal data & obstetrical history .Women aged 20-30years constituted 52.73% &72.73% of group 1 and group 2 respectively, while 47.27% and 27.27%of women of both groups respectively were30-40 years old. The difference was statistically significant. More than 75% of both groups were educated and housewives. All women in the two groups were married. The mean body mass index was significantly higher among group 1 in comparison to group 2. The table also demonstrates that about half of the women in both groups had a history of 1-3 pregnancies, had 1-3 labors, no abortion and no still birth.

Table 2: Shows the women's perception about health habits. As regards their knowledge about nutrition, more than half of the women in both groups had good knowledge about healthy nutrition, while the rest of women in both groups had poor knowledge regarding signs of nutritional deficiencies and factors affecting choice of food, with statistically significant difference between both groups. The table shows that 60% of women in group1 had good knowledge about the importance of exercise in comparison to32.73% of women in group 2 and the difference was statistically significant (p:<0.001) More than half of the women in both groups had poor knowledge about types of exercises , obstacles to do their and about hazards of smoking .The table shows also that the majority of women of both groups practiced the exercises & mentioned that they practice the exercise for activation of body, while 27.27%&38.18% of women in G1and G2 mentioned that it keeps body built, followed by 30.91%&14.54% of both groups respectively stated that it improves psychological status, with non significant difference between them . The majority of women mentioned that their husband do not smoke and they hade a positive behavior when present at sites of smoking. The table also shows 85.45% &92.73 of women of both groups have a good personal hygiene, the majority of women of G1 (74.54%) had poor hygienic care during menstruation, while 70.9% of women in G2 had good hygienic care during menstruation, with high statistically significant difference.

Table 3 : Reveals women perception about healthy reproduction &sexual practices .All the women in both groups mentioned that the best reproduction age was 18-30 years, inter pregnancy space was less than 2 years and the best number of pregnancy and delivery was from 1 to 3. More than half of the women mentioned that sexual health affects women's health. As regards importance of tetanus toxoid, 63.64% of women in G2 know its importance compared to only 47.27% of G1 .About 75% of those in G1and 70.91% of women in G2 had poor knowledge about the benefits of using contraceptive methods in women's life. The difference was statistically significance. The majority of women in both groups had didn't know the source of marital stress& how to relieve psychological stress. The table also shows that 27.27% & 56.36% of women both groups used I U D, while 40% &7.27% of both groups used pills & 23.64% and 36.36% of both groups didn't use any method and the least percentage used injection with a highly significance difference. Approximately all women in G1 &G2 took tetanus toxoid. All women of G1 mentioned that there were no husband problems, wives problems &exposed to marital stress & had poor preparation preintercourse; compared to half of the women in G2; who were exposed to marital stress and the majority of them had no husband or wives problems. There were statistically significant differences between both groups

Table 4: Shows the distribution of the studied women according to their perception about measures for early detection of reproductive diseases. It was observed that there was a significant difference between women in G1 and those in G2 in all items, except for their knowledge about abnormal signs which can be detected by self examination of external genetalia and accepting vaginal examination. Regarding their practices of self breast examination, and vaginal examination there was non significant difference between women in both groups.

Table 5: Shows the distribution of the studied women according to their perception about safe environment .About half of the women in both groups had a good concept about characteristics of safe environment and available health environment services, and the difference was not significant.

Table 6a: Illustrates that there was non significant difference between educated and illiterate women in all items of knowledge except for of their knowledge about hazards of smoking, breast and genital examination and laboratory investigations. Table (6b) illustrates there

was highly significant difference between mean of educated and illiterate women in all items.

Table 7: reveals that there was highly statistically significant difference between educated and illiterate women about all items of reproductive health practices except for items of their behavior when present at sites with smoking. Also it was found that all educated and illiterate women received tetanus toxoid vaccine. The same table also shows that there was non significant difference between educated and illiterate women regarding preintercourse preparation, husband and wives problem .In spite of 69.57% & 77.78%respectively of educated and illiterate women didn't practice breast self examination 66.30% and 44.44% respectively of educated and illiterate women didn't practice of external genetalia self examination while 67.39% and 94.44% of educated and illiterate women respectively practiced vaginal examination. The table also shows that all illiterate women of both groups exposed to marital stress compared to only 72.83% of educated women. About two thirds of educated women of both groups had available healthy environmental services compared to one third of illiterate women of both groups .There was statistically significant difference.

Discussion

Women are the cornerstone of the family and assume responsibility for many of its vital functions, so the health of the woman is a pre - requisite for the health of the whole family and by the extension of the communities. Women's health promotion is a crucial part of general health ***(Anderson & Mefarlan, 1996)***. It was developed with a target to be achieved by the year 2010 ***(Berer, 2001)***. Most of the studied women were aged 20-30 years, educated and housewives. All women were married, with mean body mass index of 40.63 and 25.92. (Table 1) Regarding women's perception about health habits, healthy reproductive and sexual practices, different studies mentioned that the child bearing period is a stressful period that is associated with special nutritional need. If these needs were not met, morbidity may result with poor physical and mental well-being, nutritional iron deficiency anemia, dental caries, irritability, dry yellow skin and low immunity to diseases. The poor nutritional status reduces fertility, prolongs post partum amenorrhea with early initiation of menopause. Anemia and malnutrition in late pregnancy lead to neonatal complication as low birth weight, prematurity and decreased milk during breast feeding .The WHO in (2000) indicated that iron deficiency anemia was common in women in the Middle, East, North Africa as Egypt and Sudan ***(Frank-Spohrer, 1996.,WHO, 2000., & Berer, 2001)***

The present study revealed that about half of the women in both groups had good knowledge about healthy nutrition, this may be due to the fact that, the majority of women were house wives and were keen to have a balanced diet and were receiving regular three meals with many types of vegetables and fruits which are cheap and available in Egypt. In addition to milk and its products which are available to women those living in rural areas as in case of the present study. In spite of this, the majority of women in both groups had not know signs of nutritional problems and factors affecting their choices of food ,and had limited knowledge about cooking techniques and healthy dietary practices..

In relation to exercise, it was reported that exercise during child bearing, including abdominal, pelvic floor and walking are important to adjust the women's body. Moreover, exercise during pregnancy is important to adjust the body so that they can better carry the load of pregnancy, improve circulation, strengthen the abdominal and pelvic floor, muscle tone, prevent discomfort and prevent complication during pregnancy and labor ***(Ibrahim, Passionne, 2000., & rickmd, 2000).***

The current study revealed that 60% of women in G1 compared to 32.73% of women in G2 knew about the importance of exercise. The majority of women in both groups knew the types of exercise and obstacles that faced them to do it. About 75% of women of both groups practiced exercises at least daily walking. This may be attributed to lack of time and work burden. This is in consistent with another study who reported that, women bear unfair burden and suffer from household and family role .They suffer more from poverty, low social status, that lead to many hazards associated with their reproductive health ***(Passionne, 2000).*** T. On other hand, improved psychological status was stated by 30.91% of women in G1 compared to 14.54% only of women in G2. These differences may be due to dissimilarity of the study design, sample setting culture and time of the study ***(Pike & Forster, 1998).*** The present study revealed that the majority of women in G1 and G2 were following proper personal hygiene. A study done by ***Gaber H in 1998*** indicated that, the skin is body's first line of defense against microorganisms & infection entering the body. It is very important to encourage any person to keep his skin intact, avoid health problems of oral cavity which can affect any system within the body, sores or poor condition of teeth of gums lead to infection & poor nutrition intake poor hand & nail care lead to the spread of infections. The majority of women in G1 were not following proper menstrual hygiene 74.54% compared to 29.9% of women in G2. This may be due to myths that, the bath during menstruation leads to increasing or stopping menstrual flow or cause fall

of hair. A recent research emphasized the importance of washing with soap; rinsing boiling & drying of reused pad in the sun shine ***(Gaber H, 1995)***. Another study revealed that bad hygiene during menstruation may lead to infection from accumulation of many microorganisms in this area. This infection can lead to upper genital tract with inflammation of fallopian tubes that could result infertility ***(Mansour, 1998)***. As regards women's perception about reproductive health sexual practice, it was noticed that all the women's in both groups knew good reproductive age, inter pregnancy spacing, better number of pregnancy &delivery, the fact that sexual health can affect women's health. According to the WHO (2000) the risk of maternal death increased for successive births after the fourth one, the risk was 1.5 to3 times higher for women with five or more pregnancy than for women with 2 or 3 pregnancy ***(WHO, 2000)***. In 1999, Deportment of reproductive health research WHO indicated that pregnancy is particularly risky to certain groups of women, very young women, old women, women with more than four children, and women with existing health problem. If all high risk pregnancies were prevented, maternal mortality could be reduce by 25 percent ***(WHO, 1995).*** A study done in Egypt (1993), reported 38% higher infant mortality among the fifth & subsequent births than among the third & fourth order births.

All women of G1&G2 received tetanus vaccine, as an obligatory vaccine, during antenatal care. In spite of this 52.73% of women in G1 didn't know the importance of tetanus vaccine compared to 36.36% only of women in G2. This may be due to lock of knowledge about the importance of tetanus vaccine during pregnancy ***(Mousa, 2001).***

Spacing and fertility regulations are major factors in keeping women's health during child bearing period. It was found that, about three quarters of women in both groups didn't know the benefits of contraceptive and family planning use, but the method selected was different as 27.27% & 56.36% of women in G1& G2 respectively were using intra uterine devices that were considered the dominant methods. A small percentage didn't use any method although safe period, male condom, or local method didn't have adverse effects; no one of the studied sample used it. This may be due to certain norms which prevent men from using contraceptive methods which may be related to the fact that these methods interrupt the act or desire of sexual intercourse. The current study indicated that, the majority of women in both groups were exposed to and knew the marital stress and mentioned that it is due to daily life stress and marriage responsibilities and low income.

Regarding measures for relieving psychological stress, the current study showed that 75% of women were managing stress by several methods as crying, asking help from relatives. This result is supported by the study of ***Carlespon et al, 1999*** Sexual relations are deeply impacting to women health, sexual response in human as a much function of the mind and the body. Because women's health has a deep impact on sexual relations as sexual response is function of the mind and body. Good communication on sexual matter increases pleasure ***(WHO, 2000).*** The current study revealed that, 92.73% and 54.54% of women in G1and G2 respectively had poor preintercourse preparation. In spite of this the majority of women in both groups mentioned there are no sexual problems for husband and wives. This may be attributed to rural culture .in addition to certain myths as those women should satisfy men, while women's desires are secondary. These factors negatively affect women's psychological and physical health.

Regarding the measures of early detection of reproductive disease the current study revealed that, about half of women in both groups didn't know the importance of self breast examination, best time for breast self examination and didn't practice it, and had poor knowledge about abnormal signs which can be detected by examination .It has been reported that, there was lack of knowledge about breast self examination ***(Rich, 2000).*** Another study reported that breast cancer is the most leading cause of death from cancer among females and the most effective early detection measure for breast cancer is breast self examination ***(Columbia.edu, 2000).*** The present study showed that 75.36% of women in G1 and 38.45% of women in G2 didn't know importance of external genetalia self examination and about one third had poor knowledge about abnormal sings which can be detected, more than half of women in both groups accepting vaginal examination and made it at home. On the other hand, 23.64% and 50.91% of women in G1 andG2 respectively practices the external genitalia examination .It has been illustrated that self examination of the external genetalia should be performed monthly by sexual active women to detect sings of precancerous condition or infection ***(WHO, 2000)***. This study is different from another study which found that more than half of the women defined self examination of external genitalia and possible abnormal finding ***(Columbia.edu, 2000).*** The same table revealed that 34.54% and 54.55% of women in both groups respectively knew time of seeking medical care. Although the women of G1 were receiving free medical care in M. C. H , the little number attending it because it provides service at a fixed time which is not available for any women to come , and most of them are rearing their children . On the other hand, women in G2 were receiving the medical

care from the private clinic because it has flexible time for them to choose their suitable time during the day. Regarding laboratory investigation, 30.91% of G1 and 52.72% of G2 didn't know its importance, 87.27% of G1 & 70.91% of G2 had poor knowledge about types of required investigations (table4). This may be attributed to financial cause, husband refuse or fear from investigation& find no value of the investigation.

As for the characteristics of safe environment & available healthy environment service, availability of education service, social service, medical service, sunny house, safe water and electricity and safe sewage disposal women of both groups were aware of them. This may be attributed to that the majority of women in both groups were educated and house wives spending most of their time in front of T.V, or listening to the radio. This can increase their awareness about safe environment & availability of environmental services. More over educated women in both groups had better knowledge about all types of reproductive health promotion &reproductive health practices then illiterate women this may be attributed to the fact that the majority of women had more & enough time to watch T.V or listen to the radio so they received good knowledge &practice from the media. In the present study we found 3 that illiteracy or a few years of education was significantly associated with low knowledge & practices of women regarding reproductive health.

Conclusion:

The present results illustrated that the health promotion for women is a function of several factors, most of which are related to the social services and family income, knowledge regarding all health promotion aspects, practices of personal hygiene and menstrual care, importance of selected healthy food and factors affecting nutrition and self examination. There was significant difference between women seeking health care at a private clinic and those attending MCH centers concerning all aspects of health promotion during their lives.

Recommendations:

According to the results of the present study, the following recommendations are proposed:

Health promotion aspects must be well prepared to be directed on a wide scale to school, MCH centers, and for the public as well.

Table (1): Socio-economic characteristics and obstetrical history of the studied females

Variables		The studied females				X^2 P
		Group I (n=55)		Group II (n=55)		
		No.	%	No.		
Demographic characteristics						
●Age	20-30	29	52.73	40	72.73	3.89*
	>30-40	26	47.27	15	27.27	0.048
●Education	Educated	43	78.18	49	89.09	6.54*
	Illiterate	12	21.82	6	10.91	0.038
●Occupation	Worker	8	14.54	20	36.36	5.80*
	House wife	47	85.45	35	63.64	0.016
●Marital status	Married	55	100	55	100	
●Body mass index	Range	19.36-40.63		20.76-33.20		
	Mean	40.63		25.92		
	SD	31.81		2.99		
	t	3.41**, P<0.01				
Obstetrical history:						
●Gravida	1-3	55	100	55	100	
	4&more	-	-	-	-	
●Parity	No	9	16.63	13	23.64	0.51
	1-3	46	83.64	42	76.36	0.474
●Abortion	No	34	61.82	41	74.54	13.33***
	1	18	32.72	4	7.27	<0.001
	2	3	5.45		18.18	
●Still birth	No	51	92.73	50	90.91	0.12
	1	4	7.27	5	9.09	0.729

NS (non significant, or P > 0.05),* P < 0.05, ** P < 0.01, *** P < 0.001
Group II (Females attending private out clinics)
Group I (Females attending maternal & child health (MCH) centers of PHC)

Table (2): Distribution of the studied women according to their perception about health habits.

Variables		The studied females Group I (n=55) No	%	Group II (n=55) No	%	X^2 P
Knowledge about:						
●Nutrition:						
◦healthy nutrition	Poor	27	49.09	15	27.27	4.66*
	Good	28	50.91	40	72.73	<0.001
◦Signs of nutrition problems	Poor	55	100	42	76.36	13.55***
	Good	-	-	13	10.17	<0.001
◦Factors affecting choice of food	Poor	55		41	74.54	13.83***
	Good	-	-	14	25.45	<0.001
●Exercise						
◦Importance	Poor	22	40.0	37	67.27	
	Good	27	49.09	18	32.73	11.61**
	Excellent	6	10.91	-	-	0.003
◦Types of exercise	Poor	38	69.09	30	54.54	1.89
	Good	17	30.91	25	45.45	0.170
◦Obstacles to exercise	Poor	40	72.73	35	63.64	0.67
	Good	15	27.27	20	36.36	0.413
●Hazards of smoking	Poor	48	87.27	43	78.18	1.02
	Good	7	12.73	12	21.82	0.313
Practice:						
●Exercise practice:	Yes	52	94.55	45	81.82	3.14
	No	3	5.45	10	18.18	0.076
●Importance of practiced exercise:						
-Activation of body		20	36.36	22	40.0	
-Keep body built		15	27.27	21	38.18	4.99
-Improve reproductive health		2	3.63	4	7.27	0.172
-Improve psychological status		17	30.91	8	14.54	
●Smoking of husband	Yes	25	45.45	6	10.91	14.55***
	No	30	54.54	49	89.09	<0.001
◦Behavior when present at site with smoking	+ve	40	72.73	43	78.18	0.20
	-ve	15	27.27	12	21.82	0.658
●Personal hygiene	Poor	8	14.54	4	7.27	0.84
	Good	47	85.45	51	92.73	0.359
●Hygienic care during menstruation	Poor	41	74.54	16	29.09	36.35***
	Good	4	18.18	39	70.91	<0.001

Table (3): Distribution of the studied women according to their perception about healthy reproductive and sexual practices

Variables		The studied females Group I (n=55) No.	%	Group II (n=55) No.	%	X^2 P
Knowledge:						
◦Good reproductive age	18-30	55	100	55	100	-
◦Interpregnancy Space	2years	55	100	50	90.91	3.35 ns
	↓2years	-	-	5	9.09	0.067
◦Better number of pregnancy &delivery	1-3	55	100	55	100	-
◦Sexual health affects women's health	Yes	31	56.36	30	54.54	0.04
	No	24	43.64	25	45.45	0.848
◦Importance of tetanus toxoid	Yes	26	47.27	35	63.64	2.36
	No	29	52.73	20	36.36	0.125
◦Benefits of using contraceptive methods in women life	Poor	42	76.36	39	70.91	6.70*
	Good	3	45.55	16	29.09	0.010
◦Sources of marital stress	Poor	55	100	48	87.27	5.94*
	Good	-	-	7	12.73	0.019
◦Measures for reliving of psychological stress	Poor	43	78.18	43	78.18	-
	Good	12	21.82	12	21.82	
Practice:						
●Types of contraceptive methods used	No	13	23.64	20	36.36	
	Pills	12	40.0	4	7.27	24.51***
	Injection	5	9.09	-	-	<0.001
	IUD	15	27.27	31	56.36	
●Tetanus toxoid intake	Yes	55	100	55	100	-
●Sexual relation						
◦Preintercourse preparation	Poor	51	92.73	30	54.54	18.73***
	Good	4	7.27	25	45.45	<0.001
◦Husbands problems	No	55	100	50	90.91	3.35
	Yes		-	5	9.09	0.067
◦Wives problems	No	55	100	45	81.82	8.91**
	Yes		-	10	18.18	0.003
◦Exposure to marital stress	Yes	55	100	30	54.54	29.82***
	No		-	25	45.45	<0.001

Table (4): Distribution of the studied women according to their perception about measures for early detection of reproductive diseases

Variables		The studied females Group I (n=55) No	%	Group II (n=55) No	%	X^2 P
Knowledge:						
●Breast & genital exam:						
◦Importance of self-breast exam.	Don't know	24	43.64	5	9.09	
	Yes	16	29.09	24	43.64	17.0***
	No	15	27.27	26	47.27	
◦Abnormal signs can be detected by breast self-exam.	Don't know	16	29.09	2	3.63	
	Poor	31	56.36	40	72.73	13.22**
	Good	8	14.54	13	23.64	
◦Best time for breast self-exam.	Don't know	35	63.64	45	81.82	
	Poor	13	23.64	10	18.18	8.64*
	Good	7	12.73	-	-	
◦Importance of external genitalia self-exam	Don't know	26	47.27	9	16.63	
	Yes	13	23.64	34	61.82	18.21***
	No	16	29.09	12	21.82	
◦Abnormal signs can be detected by ext. genetalia self-exam.	Don't know	5	9.09	2	3.63	
	Poor	20	36.36	14	25.45	3.52
	Good	30	54.54	39	70.91	
◦Accepting vaginal exam.	Yes	36	65.45	38	69.09	0.04
	No	19	34.54	17	30.91	
◦-Time of seeking medical care	Don't know	21	38.18	-	-	
	Poor	15	27.27	25	45.45	25.97***
	Good	19	34.54	30	54.55	
◦-Importance of laboratory investigations	Don't know	11	20.0	4	7.27	
	Yes	38	69.09	26	47.27	17.16***
	No	6	10.91	25	45.45	
◦-Types of required investigations	Poor	48	87.27	29	52.73	
	Good	7	12.73	16	29.09	18.21***
	Excellent	-	-	10	18.18	
Practice:						
●Self breast exam.	Yes	12	21.82	20	36.36	2.16
●External genitalia exam.	Yes	13	23.64	28	50.91	7.62*
●Vaginal exam.	Yes	40	75-2.73	39	70.91	0.4

Table(5): Distribution of the studied women according to their perception about safe environment

Variables		The studied females Group I (n=55) No.	%	Group II (n=55) No.	%	X^2 P
◦Knowing characters of safe environment	Poor	25	45.45	21	38.18	0.34
	Good	30	54.55	34	61.18	0.562
◦*Available healthy environment services*	Poor	24	43.64	17	30.91	4.47*
	Good	31	56.36	38	69.09	0.029

Table (6-a): Distribution of the studied women according to relation between education of the studied females and their knowledge about reproductive health promotion

Knowledge items		The studied females (N=110) Educated (N=92) No	%	Illiterate (N=18) No	%	X^2
●Nutrition	Poor	59	64.13	14	77.78	0.72 ns
	Good	33	35.87	4	22.22	
●Exercise	Poor	56	60.87	11	61.11	
	Good	30	32.61	7	38.89	1.35 ns
	Excellent	6	6.52	-	-	
●Hazards of smoking	Poor	80	86.96	11	61.11	5.35*
	Good	12	13.04	7	38.89	
●healthy reproductive and sexual practices	Poor	58	63.04	14	77.78	
	Good	40	43.48	6	33.33	2.68 ns
	Excellent	9	9.78	-	-	
●Breast & genital exam.	Don't know	21	22.83	12	66.67	
	Poor	29	31.52	4	22.22	14.57**
	Good	42	45.65	2	11.11	
●Laboratory investigations	Don't know	9	9.78	11	61.11	
	Poor	52	56.52	5	27.78	32.38***
	Good	29	31.52	2	11.11	
●Knowing characters of safe environment	Poor	37	40.22	9	50.0	0.26 ns
	Good	55	59.87	9	0.0	

Table (6-b): Mean score of the studied women according to relation between education of the studied females and their knowledge about reproductive health promotion

Knowledge items	Mean score of the studied females (N=110)		t-test
	Educated (N=92)	Illiterate (N=18)	
●Nutrition	30.67±4.54	6.00±3.32	26.98***
●Exercise	23.00±3.93	6.00±1.71	28.39***
●Hazards of smoking	30.67±4.82	6.00±2.35	10.38**
●healthy reproductive and sexual practices	23.00±3.48	6.24±1.92	28.90***
●Breast & genital exam.	23.80±4.83	4.50±1.19	42.09***
●Laboratory investigations	22.5±3.17	15.43±2.97	9.13**
●Knowing characters of safe environment	30.67±5.04	6.00±1.64	34.83***

Table (7): Distribution of the studied women according to relation between education of the studied females and their reproductive health practices.

Reproductive health practices		The studied females				X^2
		Educated(N=92)		Illiterate(N=18)		
		No	%	No	%	
●Exercise practice:	Yes	87	94.57	10	55.56	21.87***
	No	5	5.43	8	44.44	
◦Importance of practiced exercise:						
-Activation of body		30	32.61	12	66.67	
-Keep body built		24	26.09	6	33.33	10.28*
-Improve reproductive health		6	6.52	-	-	
-Improve psychological status		25	27.17	-	-	
●Smoking of husband	Yes	16	17.39	15	83.33	29.17***
	No	76	82.61	3	16.67	
◦Behavior when present at site with smoking	+ve	72	78.26	11	61.11	FE
	-ve	20	21.74	7	28.89	P=0.14ns
●Personal hygiene	Poor	1	1.09	11	61.11	
	Good	91	98.19	7	38.89	49.80***
◦Hygienic care during menstruation	Poor	43	46.74	14	77.78	
	Good	49	53.26	4	22.22	4.63*
●Types of contraceptive methods used	No	25	27.17	8	44.44	
	Pills	19	20.65	7	28.89	7.85*
	Injection	5	5.43	-	-	
	IUD	43	46.74	3	16.67	
●Tetanus toxoid intake	Yes	92	100	18	100	-
●Sexual relation						
◦Preintercourse preparation	Poor	65	67.39	16	88.89	
	Good	27	29.35	2	11.11	1.73 ns
◦Husbands problems	No	87	94.57	18	100	FE
	Yes	5	5.43	-	-	P=0.589ns
◦Wives problems	No	87	94.57	17	94.44	FE
	Yes	5	5.43	1	5.56	P=1.00ns
◦Exposure to marital stress	Yes	67	72.83	18	100	FE
	No	25	27.17	-	-	P=0.011*
●Available healthy environment services	Poor	29	31.52	12	66.67	
	Good	63	68.48	6	33.33	6.52*
●Self breast exam.	Yes	28	30.43	4	22.22	0.17 ns
	No	64	69.57	14	77.78	0.676
●External genitalia exam.	Yes	31	33.70	10	55.56	2.21 ns
	No	61	66.30	8	44.44	0.137
●Vaginal exam.	Yes	62	67.39	17	94.44	4.19*
	No	30	32.61	1	5.56	0.041

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الملخص العربي

إدراك ووعي السيدات عن الترقية الصحية الخاصة بالصحة الإنجابية في مراكز الأمومة والطفولة والعيادات الخاصة بمدينة طنطا

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مقدمة البحث:

المرأة هي الخلية الأساسية في بناء الأسرة فأن صلحت ،سلمت الأسرة وبالتالي النشء الجديد ويصلح المجتمع كله. المرأة هي المسئولة عن ادارة شئون أسرتها من جميع النواحي ورعايتهم رعاية شاملة نفسيا،جسديا، صحيا، ومعنويا فهى تشارك في العمل داخل وخارج المنزل . ولذلك يجب رعايتها لتجنب مخاطر من الممكن أن تتعرض لها وخصوصا في مرحلة مهمة من حياتها وهي فترة الإنجاب وذلك لحمايتها من الأمراض ،وتخفيض معدل الوفيات خلال هذه المرحلة.
الترقية الصحية تعرف بأنها برامج لصحة المرأة والمحافظة عليها وتحسين الصحة بتطوير نمط الحياة والممارسات الصحية من خلال تنظيم الأسرة، الممارسات الصحية العامة ،الممارسات الجنسية الآمنة، التطعيم أثناء الحمل، التغذية ، ممارسة الرياضة، الي جانب الفحوصات الذاتية مثل فحص الثدي وفحص الأعضاء التناسلية الخارجية والفحوصات المعملية الوقائية والمتابعة الطبية المستمرة داخل بيئة صحية.

الهدف من البحث:
يهدف البحث إلي معرفة إدراك السيدات في سن الخصوبة لوسائل الترقية الصحية الخاصة بالصحة الإنجابية، وكذلك تحديد العوامل التي تؤثر في صحتها.ويهدف أيضا الي أمداد السيدات اللائي يحتجن لتحسين إدراكهن ومعلوماتهن عن الترقية الصحية بكتيب يحتوي على عناصر الترقية الصحية.

طرق ومواد البحث:
تم أجراء هذه الدراسة في مراكز الأمومة والطفولة وعيادة المنشاوي بمدينة طنطا حيث تم أخذ ١١٠ سيدة حامل يتلقين الرعاية أثناء الحمل وقد وافقن على المشاركة في الدراسة ويتراوح أعمارهم بين (٤٩-١٥سنة)وخاليات من الأمراض المزمنة.تم جمع البيانات الخاصة بالبحث عن طريق المقابلة الشخصية مع الحوامل طبقا لجدول السيدات لكل مركز. وقد تم توزيع استمارة تحتوي علي البيانات الشخصية بالإضافة إلى احتوائها علي عدة أسئلة للتعرف على سلوكيات الحوامل فيما يتعلق بالممارسات الجنسية الآمنة ،تنظيم الأسرة، النظافة

الشخصية، الأنشطة الرياضية ، سبل مواجهة الضغوط النفسية، وتجنب مخاطر التدخين . كما اشتملت تقييم لسبل ممارسة الفحوصات الذاتية (الثدي-الأعضاء التناسلية) والفحوصات المعملية الوقائية .

النتائج:

التعليم له تأثير ايجابى على ادراك السيدات لعناصر الترقية الصحية،نقص المعلومات عن عناصر الترقية الصحية كان العامل الأساسى لسوء سلوكيتها الخاطئة . ان ضعف الخدمات الصحية وانخفاض الدخل المادى كانا أكثر العوامل المؤدية لتلك السلوكيات الخاطئة وخاصة التغذية ، هناك أهمال وعدم ممارسة للعناية الشخصية بالأخص أثناء الدورة الشهرية الكثير من السيدات كان لديهم مشاكل جنسية ولكنهن لايفضلن التحدث فيها وذلك للخلفية الثقافية.معظم السيدات لايمارسن الرياضة ويتعرضن لضغوط نفسية بسبب مسئوليات الحياة اليومية ،معظم السيدات يتعرضن لمخاطر التدخين السلبى ويجهلن أنواع الفحص الذاتي وطرقها ومواعيدها.

* وتؤكد نتائج البحث أنه:

يجب على معاهد و كليات التمريض امداد الطالبات بمعلومات شامله وتدريبهم على النواحى الصحية الوقائية و توفير كتيب يتضمن المعلومات الأساسية للنواحى الصحية الوقائية فى مراحل العمر المختلفة لجميع طالبا ت التمريض و يمكن زياده التوعية للسيدات الحوامل في مراكز الأمومة والطفولة والعيادات الخاصة و تصحيح المفاهيم الخاطئة عن طريق وسائل الاعلام المختلفة من إذاعة و تليفزيون و مجلات و صور و مجلات دورية منتظمة

التوصيات:

يوصى بالمزيد من الدراسات البحثية للتعرف على احتياجات المرأه فى سن الخصوبة او الطرق المثالية لتلبيتها ،تحسين العناصر التى تؤثر على الاداء التمريضى بالنسبة لتحسين صحة المرأه فى سن الخصوبة من خلال التعليم و التدريب و التابعه المستمرة.

Postoperative Complications Following Cesarean Delivery In Zagazig: Prevalence And Nursing Implication

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Abstract

Objective *: The aims of this study were to identify the post-operative complications experienced by women delivered by cesarean section, to find out the association between such complications and various maternal factors, and to plan and implement a program for upgrading nurse's knowledge and skills pertaining to the management of patients undergoing cesarean section.* ***Setting:*** *Zagazig University Maternity hospital.* ***Sample****: Two samples were selected for this study, 300 of parturient women coming for delivery, after 28 weeks of gestation, A systematic random sample was consecutively recruited among those women, either primi or multigravida, and undergoing cesarean section whether elective or emergency, and with any type of cesarean section. The other sample were 20 secondary school diploma nurses at different ages, and with different years of experiences.* ***Tools for data collection:*** *Women interview questionnaire, Women observation checklist, Follow up sheet, Nurses' knowledge questionnaire, Nurses' performance observation checklist and Nursing Training Program.* ***Results:*** *There was a significant association between post operative complications and various maternal factors such as age, income, education, job status, residence and body mass index. There was a positive relation between complications and type of anesthesia, type of caesarean section and duration of operation. More complications were due to repeated caesarean section, placenta previa, toxemia and failed induction of labor. Fewer complications were due to cephalo pelvic disproportion and mal presentation.*

Introduction

Caesarean section is the delivery after 28 gestational weeks of the fetus, placenta and membranes through an abdominal and uterine incision. When a cesarean is necessary, it can be a life saving technique for both mother and infant. **(*Decherney and Nathan 2003*)**.

Caesarean sections are more prevalent among women who are older, obese or suffering from pre-eclampsia or eclampsia, or have a large fetus, had a previous caesarean, or have received fertility drugs ***(Gary et al., 2001).***

Cesarean section is a major operative procedure and consequently many complications that have never seen in vaginal deliveries have encountered ***(Hillan, 1995)***.The risk of a mother dying with caesarean section is small, but is still considerably higher than with vaginal birth. The rate of maternal death associated with repeated cesarean section (approximately 4 per 10,000 births) is four times that associated with all types of vaginal birth (1 per 10,000 births). Most forms of maternal morbidity are higher with caesarean section than with vaginal birth. In addition to the risks of anesthesia attendant on all surgeries, there are risks of operative injury, infection, postpartum pain, effects on subsequent fertility and of psychological morbidity as well. Moreover, the prolonged hospitalization and increased costs of caesarean section compared to vaginal birth may be considered as a form of maternal morbidity ***(Enkin et al., 2000)***.Nurse's role is crucial in preventing complications and assessing patient needs at the hospitals because she stays with the patient 24 hours per day, that is why she should have sound knowledge of pathophysiology, medical management and nursing care of the women during the pre and post-operative period. Furthermore, the nurse is in a key position to educate others and influence many aspects of care provided to the women undergoing caesarean section and their families ***(JSPN, 2000)***.

Subjects and methods

Study design:

The design used in the study is the prospective and intervention design.

Sample:

Sample size:

Two samples were selected for this study, namely a sample of parturient women, and another sample of nurses. The sampling population consisted of 300 women coming for delivery, after 28 weeks of gestation, and admitted for management by cesarean section within the period from 1st of January till end of July 2005.

Sample characteristics:

A systematic random sample was consecutively recruited among those women, either primi or multigravida, and undergoing cesarean section whether elective or emergency, and with any type of cesarean section.

Setting:

The setting for data collection was Al-Zagazig University Maternity hospital. The sample was adopted from the labor unit.

Tools used for data collection:

Data collection was done through the use of several tools:

1- An interview questionnaire: was used to collect parturient women personal data, medical history, family history, and obstetric history.
2- An observation checklist was designed to record data pertaining to labor diagnosis, type and indications of cesarean section, preoperative preparation, medication and anesthesia, condition during operation, summary of labor, and outcome.
3- A follow up sheet was used to record post-operative data and complications. Follow-up period started immediately following the operation until patient's discharge, and at the time of removing the sutures in outpatient clinic.
4- ***A nurses' knowledge evaluation sheet*** was designed to assess nurses' knowledge about cesarean section
5- Nurses' performance observation checklist: to record nursing practice during post-operative cesarean section before program
6- A training program was designed for upgrading nurse's knowledge and skills pertaining to the management of patients undergoing cesarean section,

Pilot Study:
A pilot study was done on a sample of 20 patients and 5 nurses with the aim of testing the applicability and completeness of the tools of data collection. The pilot study also included pilot implementation of the program with the aim of estimating the exact time needed for each session, deciding on the exact number of sessions, and detecting any problems related to its application.

Results

Table(1) shows that more than half of women were below 25 years old and the highest percentage of them had secondary school education. Moreover, more than two thirds of women (70.3%) were housewives, and were living in rural areas (70.3%).

It is obvious from **table (2)** that Previous cesarean section was the most common indication, (28.3%) followed by failed induction of labor (20.7%).

Table (3) revels that about two-fifth (39.3%) of the women had no antenatal care and only slightly less than one third (31.3%) of them were prepared for cesarean section.

Table (4) illustrates that most of the cesarean sections were emergency ones and more than two thirds were done with general anesthesia. Also

the great majority of sections were lower uterine segment. And the duration of the operation was mostly from 30 to 40 minutes.

According to **table (5)**, only 17.7% of women were satisfied with nursing care, considering it sufficient.

Table (6) shows that the incidence of early post-operative complications following cesarean section was less than 15%. The complication with the highest percentage was atonic postpartum hemorrhage (5.0%), followed by traumatic postpartum hemorrhage (4.7%) and fever (4.0%).

It is evident from **Table (7)** that late post-operative complications occurred among about one-fifth of the women. The highest percentage of these complications was wound infection, (8.7%) followed by wound dehiscence(7.0%).

As shown in **table (8)** the lowest incidence of complications was in the age range 25-<30 years. Conversely, it was highest among women of 30 years old or more. This relation was statistically significant (p=0.008).
As for education, the table points to a statistically significant relation, with a trend towards decreasing incidence of complications with increasing level of education (p=0.027). Conversely, the incidence of post-operative complications had an increasing trend with increasing body mass index. This relation was also statistically significant (p=<0.001). Although the incidence of post-operative complications was higher among low income, working, and rural women, the differences could not reach statistical significance.

According to **Table (9)** the highest percentages of complications occurred among women with diabetes mellitus and heart diseases (40.0%). These were followed by preeclampsia (28.0%) and antepartum hemorrhage (27.0%). Moreover, about one fourth of women with recurrent cesarean section had complications. The lowest incidence of complications was among women who were post date, and those who had cephalopelvic disproportion or malpresentation.

Table (10) revealed a significant relation between post-operative complications and both of duration of operation and nursing care. The post-operative complications were steadily increasing with increased duration of the operation. The rate was 16.1% when the duration was less than 30 minutes, and rose to 41.0% with a duration of 40 minutes or more. Also with sufficient nursing care the incidence of complications was only 17.0%, compared to 42.9% with poor nursing care.

Table (11) points to statistically significant improvements in nurses' knowledge about cesarean section at post-test,

Table (12) illustrated statistically significant improvements in nurses' total practice scores related to cesarean section after implementing the program.

Figure (1) shows that slightly more than half of women were overweight.

Figure (2) illustrate that the total incidence of complications occurred among slightly more than one third of the women, with subsequent complications being more frequent compared to early complications.

Discussion

Cesarean section is a major operative procedure, and consequently many complications may be encountered. It is important to know the possible etiologies, and when and how nursing care might prevent these complications.

Among the factors that may affect the use of cesarean section are the socio-demographic characteristics of mothers such as age, job status, educational level, and place of residence. It is also affected by women's obstetrical history such as parity, as well as the indications of cesarean section.

Concerning the current cesarean section indications, the present study findings have indicated that previous cesarean section was at the top of the list, with the highest percentage of indications, reaching up to one fifth of the sample. This was followed by failed induction of labor. The findings are in agreement with ***Hager et al (2006)*** who have shown that the most frequent indications were fetal stress, prolonged labor, previous caesarean section

The percentage of fetal distress as an indication of cesarean section was 13.7% in the present study. This figure is very close to that reported by ***Nichols and Pearson (2000)*** who have mentioned that women undergoing cesarean delivery due to fetal distress represent 13% of laboring women.

Other indications of cesarean section in the present study were antepartum hemorrhage and toxemia of pregnancy. In congruence with these findings, ***Joseph (2005*)** has claimed that cesarean section is the safest treatment for both mother and fetus in placenta praevia with severe bleeding.

According to the present study findings, malpresentation and cephalo-pelvic disproportion were at the middle of the list of the indications of cesarean section. In this regard, ***Hewson et al (2000)*** have mentioned that planned cesarean section is better than planned vaginal birth for the term fetus in the breech presentation. Also, ***McAleese (2000*)** has stressed that cephalo-pelvic disproportion is an absolute indication for cesarean birth. Additionally, ***Chhabra et al (2000)*** has reported that cesarean section is the best treatment for a brow presentation with the head at the level of pelvic brim. These findings are going on with the present study.

According to the present study results, the most common early post-operative complications following cesarean section was atonic postpartum hemorrhage, followed by traumatic postpartum hemorrhage, and fever. Two women had hysterectomy, and one had hemorrhagic shock. Overall, less than one-fifth of the studied women had such complications. These results are similar to those achieved by ***Eggebo and Gjessing (2000)*** who have concluded that hemorrhage is a serious complication of cesarean delivery.

Meanwhile, ***Liu et al (2005)*** have reported that higher readmission rates after cesarean section were due to pelvic injury, genitourinary problems, postpartum hemorrhage, and major puerperal infection. Therefore, ***Hopkins (2000*)** have recommended that prophylactic antibiotics for cesarean section have been shown to reduce the incidence of subsequent episodes of fevers.

The highest percentages of subsequent post-operative complications among women in the present study were mostly related to infections. This was in the form of wound infection and wound dehiscence, urinary tract infections, and respiratory tract infections. This is in coherence with ***Lefty et al (1996)*** who have similarly reported that the common types of infections after cesarean delivery included wound infection, endometritis, urinary tract infection, and occasionally pelvic abscess. More recently, ***Assaf et al (2005)*** have added that cesarean delivery is associated with an increased rate of respiratory morbidity, which is in agreement with the present study findings.

The present study results have demonstrated that post-operative complications were statistically significantly related to women's age, education, and body mass index. Complications occurred more frequently among older women. They also tended to decrease with increasing level of education, and to increase with increasing body mass index. They were

also more common among low income, working, and rural women, although with no statistical significance. In congruence with these findings, ***Bell et al (2001*)** have shown that both obstetric interventions and obstetric complications were more common among older women.

Also in congruence with the present study finding relating post-cesarean complications to body mass index, or obesity, ***Langer et al (2005)*** have investigated the relationship between prepregnancy weight and pregnancy outcome in a group of women with gestational diabetes. It was found that obese women had a 2- to 3-fold higher risk for adverse pregnancy outcome when compared with overweight and normal weight patients with well-controlled GDM.

It was found that the highest percentages of complications occurred among women with diabetes mellitus and heart diseases, each reaching about two-fifth of the sample. These were followed by preeclampsia and antepartum hemorrhage, less than one third each. Also, about one fourth of women with recurrent cesarean section had complications. Complications were lowest when the indications were post-date, cephalopelvic disproportion, and malpresentation. These findings are in partial agreement with ***Simoes et al, (2004)*** who have mentioned that pre-eclampsia and placenta praevia predispose to excessive blood loss at cesarean section.

Moreover, the relation between the occurrence of complications and the indications of recurrent cesarean section, failed induction of labor, and fetal distress were also previously reported. Thus, ***Qublan and Tahat (2006)***, in a study of multiple cesarean section in Jordan, have evaluated the complications, and determined maternal and fetal risks in women who underwent three or more cesarean sections, compared to those with one or two cesarean deliveries. It was found that, compared to women with one or two cesarean deliveries, women who had three or more sections had a significant increase in terms of prolonged operative time, uterine scar dehiscence, uterine rupture, placenta previa, placental adherence, and mild adhesion formation.

Nevertheless, and in congruence with the present study findings, ***Maslow and Sweeny (2000)*** have mentioned that failed induction of labor increased the rate of cesarean delivery complications.

According to the present study findings, there was a statistically significant relation between the duration of operation and the incidence of post-operative complications. The figures point to an increasing trend of

post-operative complications with the increase in the duration of the operation. This finding is in congruence with what ***Koigi-Kamau et al (2005).*** These authors have asserted that prolonged rupture of membrane and long duration of cesarean section are associated with significantly higher incidence of wound infection.

The present study has also revealed a statistically significant relation between post-operative complications and nursing care. Post-operative complications tended to decrease with increasing efficiency of nursing care. This finding is in agreement with ***Su et al (2005)*** who have confirmed that effective post-operative nursing care eliminates the intra-operative and post-operative site infection following cesarean section.

Regarding antenatal care, no statistically significant differences could be detected between the incidence of post-operative complications among women who have not received antenatal care, and those who had either in private settings or MCH centers. This indicates inefficiency of antenatal care. ***Sun et al (2005)*** had a similar finding, and have claimed that antenatal care has limited efficiency in reducing most maternal complications. It was found that 35.6% of women who developed maternal and perinatal complications would be identified through screening for risk factors at the first antenatal care visit. Hence, the authors have recommended that the standard antenatal care model is currently not well complied. It has limited efficacy in reducing most maternal and perinatal complications.

Concerning the type of cesarean section, no statistically significant difference was shown between elective and emergency sections in the incidence of complications. The finding is in agreement with ***Dimitrova et al (2005)*** who have carried out a study on post-operative complications following elective and emergency caesarean delivery in Bulgaria.

As for anesthesia, the present study findings could not demonstrate any statistically significant difference between post-operative complications following general and regional anesthesia. This result is in disagreement with ***Bowring et al (2006)*** who have emphasized that the use of regional anesthesia would minimize maternal complications after cesarean section.

The second part of the present study consisted of an intervention that aimed at improving nurses' knowledge and practice regarding cesarean section. The study findings have revealed that the percent knowledge and practice scores at the pre-test, before program implementation, were low.

However, statistically significant improvements in nurses' knowledge and practice about cesarean section were noticed at the post-test. These findings are in agreement with the results of the study carried out by ***Gitlow et al (1995)*** who have similarly reported improvement in nurses' knowledge and practice about cesarean section after implementing a training program.

Conclusion

In the light of the present study findings, it can be concluded that most post-operative complications following cesarean section were hemorrhage and infection. Many risk factors were associated with post-operative complications. Some of these factors were related to the socio-demographic characteristics such as age, residence educational level and body mass index. The identification of these factors would help in correct control of post-operative complications. Moreover, the study has revealed that the nursing care given to women undergoing cesarean section was insufficient, which consequently might have adverse effects on maternal and/or fetal outcomes. This might be related to the low level of knowledge and performance revealed among nurses before the training program. The implementation of a training program was associated with increases in nurses' knowledge and skills, with subsequent expected improvements in maternal and neonatal outcomes.

Recommendations

On the basis of the most important findings of the study, the following recommendations are suggested:

- Risk factors of post-operative complications following cesarean section play an important role, thus the maternity nurse should be alert for early detection and identification of these factors in order to reduce maternal and fetal complications
- Implementation of the training program for all nurses in the labor departments to improve nursing care provided for cesarean section women is suggested
- The concept of quality care should be applied in cesarean section ward, to improve nursing practice, and increase satisfaction among parturient women
- It is recommended to do a weekly team conference for nurses with their supervisors, aiming at exchanging ideas, and discussing the difficulties facing them in management of parturient women.

Table1. Socio-demographic characteristics of women undergoing cesarean section (n=300)

Characteristics	Frequency	Percent	Mean ± SD
Age (years):			
20-	164	54.7	26.1 ± 4.9
25-	73	24.3	
30 – 35	63	21.0	
Income (LE):			
<300	24	8.0	355.7 ± 84.3
300-	249	83.0	
500 +	27	9.0	
Education:			
Illiterate	46	15.3	
Read/write	111	37.0	
Secondary	120	40.0	
University	23	7.7	
Job status:			
Working	89	29.7	
Housewife	211	70.3	
Residence:			
Rural	220	73.3	
Urban	80	26.7	

Table 2. Current cesarean section indications among studied women (n=300)

Indications:	Frequency	Percent
Previous cesarean section	85	28.3
Failed induction of labor	62	20.7
Fetal distress	54	18.0
Antepartum hemorrhage	36	12.0
Toxemia	35	11.7
Malpresentation	28	9.3
Cephalopelvic disproportion	27	9.0
Post date	13	4.3
Twins	11	3.7
Congenital anomalies	6	2.0
Diabetes Mellitus	5	1.7
Heart disease	5	1.7
Others	11	3.7

Table (3): Present obstetric history of women undergoing cesarean section (n=300)

	Frequency	Percent
Gestational age:		
28-32	9	3.0
33-37	49	16.3
38-41	242	80.7
Antenatal care:		
None	118	39.3
MCH center	95	31.7
Private	87	29.0
Preparation for cesarean section	94	31.3

Table (4): Characteristics of current cesarean section among studied women (n=300)

Characteristics:	Frequency	Percent
Type of cesarean section:		
Elective	94	31.3
Emergency	206	68.7
Type of anesthesia:		
General	205	68.3
Regional	95	31.7
Technique:		
Upper segment	13	4.3
Lower segment	287	95.7
Duration of operation (min):		
<30	31	10.3
30-40	172	57.4
>40 minutes	97	32.3

Table (5): Nursing care and hospital stay among women undergoing cesarean section (n=300)

Characteristics:	Frequency	Percent
Nursing care:		
Sufficient	53	17.7
Insufficient	128	42.7
Poor	119	39.7
Hospital stay (days):		
2	136	45.3
3	113	37.7
4	51	17.0

Table (6): Early post cesarean section complications among studied women (n=300)

Early complications:	Frequency	Percent
Atonic postpartum hemorrhage	15	5.0
Traumatic postpartum hemorrhage	14	4.7
Fever	12	4.0
Hysterectomy	2	0.7
Hemorrhagic shock	1	0.3
None	256	85.3

Table (7): Subsequent post cesarean section complications among studied women

Subsequent complications:	Frequency	Percent
Wound infection	26	8.7
Wound dehiscence	21	7.0
Urinary tract infection	7	2.3
Respiratory tract infection	5	2.0
Peritonitis	2	0.7
None	239	79.7

Table (8): Relation between complications and socio-demographic characteristics of women undergoing cesarean section

Characteristics	Complications				Chi-square test	p-value
	Present (n=105)		Absent (n=195)			
	No.	%	No.	%		
Age (years):						
20-	62	37.8	102	62.2	9.74	0.008*
25-	15	20.5	58	79.5		
30 – 35	28	44.4	35	55.6		
Income (LE):						
<300	10	41.7	14	58.3	0.81	0.67
300-	87	34.9	162	65.1		
500 +	8	29.6	19	70.4		
Education:						
Illiterate	22	47.8	24	52.2	9.18	0.027*
Read/write	42	37.8	69	62.2		
Secondary	38	31.7	82	68.3		
University	3	13.0	20	87.0		
Job status:						
Working	37	41.6	52	58.4	2.40	0.12
Housewife	68	32.2	143	67.8		
Residence:						
Rural	84	38.2	136	61.8	3.67	0.06
Urban	21	26.3	59	73.8		
Body mass index						
Ideal	4	11.1	32	88.9	16.47	<0.001*
Overweight	49	32.0	104	68.0		
Obese	52	46.8	59	53.2		

Table (9): Relation between indications of cesarean section and complications among women undergoing cesarean section

Indications	Total Women	Complications		X^2 (p-value)
		No.	%	
Diabetes Mellitus	5	2	40.0	6.09 (0.73)
Heart disease	5	2	40.0	
Preeclampsia	35	10	28.6	
Antepartum hemorrhage	36	10	27.8	
Previous cesarean section	85	22	25.9	
Failed induction of labor	62	15	24.2	
Fetal distress	54	11	20.4	
Twins	11	2	18.2	
Congenital anomalies	6	1	16.7	
Post date	13	2	15.4	
Cephalopelvic disproportion	27	4	14.8	
Malpresentation	28	4	14.3	
Others	11	3	27.3	

Table (10): Relation between complications and characteristics of current cesarean section

Characteristics	Complications				Chi-square test	p-value
	Present (n=105)		Absent (n=195)			
	No.	%	No.	%		
Antenatal care:						
None	44	37.3	74	62.7		
MCH center	31	32.6	64	67.4	0.52	0.77
Private	30	34.5	57	65.5		
Type of cesarean section:						
Emergency	78	38.0	127	62.0		
Elective	27	28.4	68	71.6	2.64	0.10
Type of anesthesia:						
Regional	27	28.7	67	71.3		
General	78	37.9	128	62.1	2.37	0.12
Duration of operation (min):						
<30	5	16.1	26	83.9		
30-40	60	34.9	112	65.1	6.51	0.04*
>40 minutes	40	41.2	57	58.8		
Nursing care:						
Sufficient	9	17.0	44	83.0		
Insufficient	45	35.2	83	64.8	10.79	0.005*
Poor	51	42.9	68	57.1		

Table (11): Assessment of pre-post nurses' total knowledge about cesarean section

	Percent knowledge score (mean±SD)	Paired t-test	p-value
Pre (n=20)	51.1±4.2		
Post (n=20)	90.3±8.3	22.81	<0.001*

Table (12): Assessment of pre-post nurses' total practice cesarean section

	Percent knowledge score (mean±SD)	Paired t-test	p-value
Pre (n=20)	45.6±3.6		
Post (n=20)	89.5±9.8	19.15	<0.001*

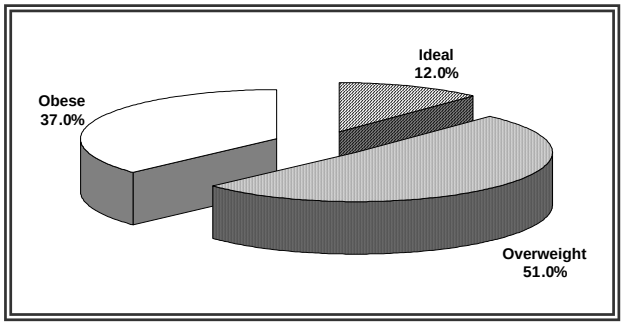

Figure (1): Distribution of obesity among women undergoing cesarean section (n=300)

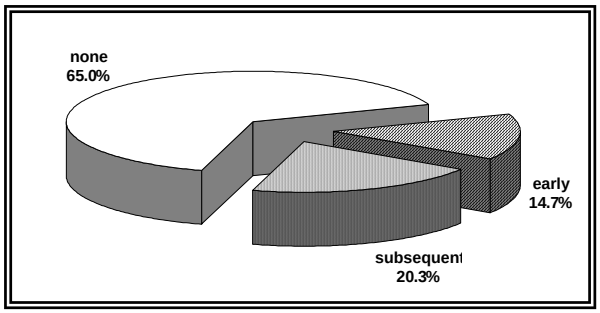

Figure (2): Incidence of complications among women undergoing cesarean section (n=300)

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الملخص العربي

المضاعفات بعد الولادة القيصرية في الزقازيق

معدل الانتشار والمفهوم الضمني للتمريض

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مقدمه:

أصبح ارتفاع معدل الولادات القيصرية مشكله صحية هامه في العالم وأيضا في مصر. وتنتشر الولادة القيصرية أكثر بين الحوامل المتقدمات في السن او اللاتي تعانين من السمنة او تسمم الحمل او الوضع غير الطبيعي للمشيمة، والتعرض لقيصريه سابقه والحمل المتعدد الناتج عن علاج العقم. ويقوم الطبيب بإجراء العمليه القيصريه حين يري انها الأكثر امنا للام او الجنين او كليهما، وعلي الرغم من اهميه القيصريه إلا أنها قد تسبب حدوث بعض المشاكل والمضاعفات، ومن هذه المضاعفات ما يكون مضاعفات مبكره مثل النزيف والاصابه بمحري الولاده، ومنها ما يكون مضاعفات متأخرة مثل الالتصاقات وتفتح الجرح في جدار البطن او الرحم، كما تزيد احتمالات الحمل خارج الرحم والاوضاع غير الطبيعيه للمشيمه وذلك في الحمل اللاحق. والتمريض له دور بالغ الاهميه في الوقايه والعنايه بالكثير من هذه المضاعفات.

الهدف من البحث: -

يهدف هذا البحث الي التعرف علي المضاعفات الاكثر شيوعا بعد الجراحه لدي السيدات اللاتي أجريت لهن عمليه قيصريه في مستشفي الزقازيق الجامعي، وكذلك دراسه العلاقه بين هذه المضاعفات والعوامل الشخصيه لكل سيده، كما كان الهدف ايضا تقييم العنايه التمريضيه لتلك السيدات واعطاء برنامج تدريبي لهيئه التمريض عن العنايه التمريضيه عاليه الجوده بغرض تحديث معلوماتهن ورفع مهاراتهن في العنايه بالامهات قبل واثناء وبعد الولاده القيصريه.

الخلاصه: -

أظهرت الدراسه ان مضاعفات العمليه القيصريه الاكثر شيوعا هي النزيف ويليه العدوى. وكانت اهم عوامل المخاطره تقدم السن وانخفاض المستوي التعليمي والسمنه. وتبين قصور الرعايه التمريضيه، وقد اثبت البرنامج التدريبي فعاليته لجميع الممرضات علي الرغم من اختلاف أعمارهن وخبراتهن مما يشير الي اهميه البرامج التدريبيه الدورية.

التوصيات: -

أسفرت هذه الدراسة عن التوصيات التاليه: -

- من الضروري المتابعه الجيده قبل وأثناء وبعد فتره الحمل تجنبا لكثير من مضاعفات الولاده القيصريه.
- يجب ان يكون هناك برامج تدريبيه دوريه لهيئة التمريض بغرض تحديث معلوماتهن ورفع كفاءتهن في العنايه بالأمهات قبل واثناء وبعد العمليه القيصريه.
- أن مفهوم الجوده في الاداء التمريضي الخاص بعنايه السيدات قبل واثناء وبعد إجراء العمليه القيصريه، هو تحسين العنايه التمريضيه وذلك ينعكس علي مدي رضا السيدات بمستوي العنايه المقدمه لهن.
- توصي الدراسه بعقد إجتماع أسبوعي للممرضات في القسم لمناقشه المصاعب التي تواجههن، وتبادل الأفكار التي تخص العنايه بالسيدات بعد العمليه القيصريه.

Episiotomy and Perineal Tears among Low Risk Parturient Women in Zagazig University Hospital

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Abstract

Women who delivered vaginally suffer from some kind of perineal trauma, spontaneous perineal lacerations or episiotomies. Perineal trauma during childbirth may result in multiple long-term urinary and gynecologic problems. The aims of the present study were to determine the rate of episiotomies and tears among parturient women, to determine the risk factors for episiotomy and perineal tears and to assess the perineal care measures that are used during labor to reduce perineal tear and episiotomy at childbirth. A descriptive design was used for the conduction of the study. The sample consisted of 150 parturient women in labor, selected purposively from Labor Unit at Zagazig University Hospital. Tools used in the study included a questionnaire and assessment sheets(mother and neonatal).

Introduction

Episiotomy is a surgical incision in the perineum. There are three common types of episiotomy used (mid line, mediolateral, lateral) ***(Basal et al., 1997).*** Recent studies indicated that women who had episiotomies had higher rates of anal incontinence during the first six months postpartum, even compared with women who had equal tears. In addition, episiotomy carries the same risks as other surgical procedures, including increased blood loss and infection ***(British Medical Journal, 2004).***

Episiotomies are always not necessary, and use of episiotomy can be reduced by some preventative measures such as, good nutrition, Kegel exercises during pregnancy, prenatal perineal massage, slowed second stage of labor, warm compresses, perineal massage and perineal support during delivery of the fetal head ***(Georgine & Stamp, 1999).***

Spontaneous injuries of the perineum commonly occur during childbirth and can result from the following causes; Rapid delivery of the fetal head such as the delivery of the head while straining, forceps delivery

and vacuum extraction**.** Over stretching of the introitus that occur with the delivery of large fetus or in case of narrow introitus, occipito-posterior position, face presentation.

Rigid perineum may be also a possible cause of perineal injury. It occurs in case of old primi gravida, with previous perineal scar, over flexion or abduction of the thighs of the mother during delivery of the head or shoulder***(Hueston, 1999 and Toppozada et al., 1999).***

Women who have perineal tears during childbirth, experience perineal pain or discomfort after birth, this pain can make ordinary activates such as; walking and sitting difficulties. Also breast feeding difficult and physical demand of caring for a new baby harder. ***(Goetsch, 1999).***

It can be concluded that, problems encountered among women due to episiotomy and perineal tears are numerous and vast. This does not only affect mothers during labor but also during puerperium. The nurse midwife can play a role in support of women during and the practice of perineal measures that are used during labor to reduce perineal tears and episiotomy at childbirth.

Aims of the study:-

1-To identify rate of episiotomy and perineal tears among low risk parturient women.

2-To assess risk factors related to episiotomy and perineal tears.

3-To assess the perineal care measures that are used during labor to reduce perineal tear and episiotomy at childbirth.

Materials and methods

A descriptive design was used in carrying out this study. The study was carried out in the Delivery Room in Zagazig University Hospital in Zagazig City during the period from June 2005 to December 2005.

Subjects:

The total sample consisted of 150 parturient women selected purposively from the Labor Unite in Zagazig University Hospital. The women selected for the study sample fulfilled the following criteria; in active phase of labour, with no indication for caesarean section and their parity, from para 1 and more**.**

Tools:

The researcher used three different tools to collect the data: -

1) An interview questionnaire sheet
2) Maternal assessment sheet

3) Neonatal assessment sheet.

Methods of data collection:-

Official letters from the Faculty of Nursing were forwarded to concerned personnel at Zagazig University Hospital to facilitate data collection**.** A pilot study was conducted on 20 parturient women attending the aforementioned labor unit. Verbal consent to participate in the study was obtained from the parturient woman before any assessment and after explanation of the purpose and procedures of the study. The total sample was chosen from the labor section. The researcher and the attending obstetrician assessed the parturient mothers admitted to labor unit. Those who were in accordance with the sample criteria were selected for the study group.

Results:-

Figure 1 illustrates the rate of episiotomy and perineal tears among low risk parturient women in the study sample. It indicates that 22.7% of women had episiotomy, and 22% had tears while more than fifty percent (55.3%) had intact perineum.

Table 1 demonstrates a statistically significant differences between the three conditions of the perineum as regards parity and gravidity. Women with intact perineum were likely to have parity more than para one and gravida more than two (82.9% & 77.2% respectively).The differences observed were statistically significant. (X^2= 44.2, P =0.00 and X^2= 34.4, P=0.00 respectively)**.**

Concerning the birth interval in table 2. It is clear that the highest proportion (74.4%) of women in the intact perineum group had their birth interval more than 3 years compared to tears and episiotomy groups (17.9% and 7.7% respectively).The difference observed was statistically significant (X2=9.0, P=0.01).

As regards birth attendant, a high percent 88.9% of women in intact perineum group had their last delivery conducted by midwives compared to tears and episiotomy groups (5.6% and 5.6% respectively). The difference observed was statistically significant (X2 = 21.5, P=0.00).

Concerning the mode of last delivery **table 2** also reveals that, more than fifty percent(58.1%) of women with intact perineum had spontaneous vaginal delivery compared to those in tears and episiotomy groups(20.6%

and 21.3% respectively).The difference observed was statistically significant. (X2 = 13.4, P =0.00).

Concerning the presence of perineal trauma in last delivery, it is clear from **table 3** that, 80.4% of mothers in intact perineum group hadn't perineal trauma during their last delivery, compared to 15.2% in tears group and 4.3% in episiotomy group. Difference observed was statistically significant (X2 = 69, P=0.00). The same table also reveals that the most common post natal care done for perineal tears and episiotomy groups was Sitz bath (36.6% & 50% respectively).

Table 4. Reveals that 61.0% of women in intact perineum group have their total vaginal examinations ranged between 1-5 times compared to 31.7% in tears group and 7.3% in episiotomy group. Difference observed was statistically significant (X2 =12.6, P =0.01). This table also shows that 75.4% of mothers in intact perineum group have their vaginal examination every one hour compared to 18 %% in tears group and 6.6% in episiotomy group. The difference observed was statistically significant (X2 = 19, p =0.00).

As shown in **table 5,** 97% of women in intact perineum have sufficient psychological support during labor, compared to only 2% in tears group and 1% in episiotomy group, the difference observed was statistically significant (X2=57.6, P =0.00). Regarding to the induction of labor, the same table reveals that 54.2% of women in intact perineum group had induction of their labor compared to 20% in tears group and 25.8% in episiotomy group. However difference observed was statistically significant (X2 =3.8, P =0.1). The same table also reveals that 79.6% of women in intact perineum hadn't bear down during first stage of labor compared to 6.5% of women in tears group and 14% in episiotomy group. The difference observed was statistically significant(X2=61.0, P =0.00).

Table 6. demonstrates the care measures provided during the second stage of labor to minimize the occurrence of perineal trauma. As regards transition of parturient women to the delivery room, women with intact perineum were more likely to be transported to delivery room when the cervix was fully dilated (62.6%), compared to 19.6% in tears group and 17.8% in episiotomy group. The difference was statistically significant (X2 =8.5, P=0.01). The same table also shows that 73.1% of women in intact perineum group received ironing of the perineum between contractions, compared to 13.5% in tears group and 13.5% in episiotomy group. The difference was statistically significant (X2 =43.2, P =0.01).

Concerning perineal support, 3.2% of women in the intact group perineum didn't receive perineal support compared to 61.3% in tears group and 35.5% in episiotomy group. Statistically there was a significant difference (X2 =49.2, P =0.00). The same table also reveals another risk factor related to occurrence of perineal trauma during child birth, which is correct pushing with each uterine contraction that was not done for 5.8% of women in intact perineum group, compared to 42.4% in tears group and 49.2% in episiotomy group. Difference observed was statistically significant (X2 =87.0, P =0.00).

As shown in **table 7**, a statistically significant difference was detected between the three conditions of the perineum as regards panting during delivery of fetal head; women with intact perineum were more likely (65.2%) to pant during delivery of fetal head compared to 13% in tears group and 21.8% in episiotomy group. Difference observed was statistically significant(X2 =72.8, P =0.00).

Table 7 also shows that 65.8% have fetal head maintained flexed in the intact perineum group, compared to 15% in tears group and 19.2% in episiotomy group. The difference was statistically significant (X2 =28.5, P =0.00). The same table reveals that 31.7% in intact perineum group had fundal pressure during second stage of labor compared to 26.7% in tears group and 41.7% in episiotomy group. The difference was statistically significant (X2 =27.0, P =0.00).

Discussion:-

The present study results revealed that, the prevalence of episiotomy and perineal tears among low risk parturient women in Zagazig University Hospital is 22.7% for episiotomy and 22%for perineal tears. This study result was nearly the same of that ***Walling, (2001),*** who found in a similar study of women who delivered spontaneously, that 46.7% had an intact perineum after delivery and 53.3% had perineal trauma. However ***Eberhard et al., (2000),*** reported that, episiotomy rate in the United States has dropped from a previous higher rate of 80% to a rate lower than 15%. However, the present study results to some extent were in accordance with those of ***Shihadeh & Nawafleh (2001),*** who found in their study that, the incidence of episiotomy was 39% and third degree of tears occurred in 1 %of deliveries. In a similar study, ***Sheiner et al., (2006),*** found higher incidence of episiotomy 32% of the population and spontaneous perineal tears requiring suturing occurred in 28%.

Investigating gravidity and parity, results of the present study showed that slightly less than half of women with perineal trauma either tears or episiotomy were para one. In accordance with the previous finding**, *Sheiner et al., (2006),*** clarified that women with low parity are prone to perineal trauma and therefore deserve special attention. Similarly, ***Bodner-Adler et al., (2001)***, found that low parity, large infant head diameter, prolonged second stage of labor and use of oxytocin were identified as risk factors for third-degree perineal tears during vaginal delivery.

As regards the relationship between the history of last delivery and occurrence of perineal trauma during childbirth, the present study results indicated that women with intact perineum were more likely to have their birth interval more than 3 years. This finding was supported by ***Lowenstein et al., (2005),*** who identified that shorter interval since last vaginal delivery, longer active phase, prolonged second stage (>40 minutes) and low parity were independent risk factors for perineal tears.

Another important risk factor is history of perineal trauma in last delivery, the present study results revealed that a high percent of women in perineal trauma group have history of episiotomy and perineal tears during their last delivery. This finding is in agreement with ***Martin et al., (2001) and Bruce (2006),*** in their studies of spontaneous perineal tears at the second delivery. They reported that, having a perineal trauma at the first delivery increases the risk of spontaneous perineal trauma at the second delivery. The risk of spontaneous perineal trauma at the second delivery increased with the severity of previous perineal trauma at birth and tears result from the scar of previous tears. In the same line ***Labrecque (2003),*** reported that perineal trauma at first delivery increases the risk of subsequent tearing and women who experience perineal tears or episiotomy during first delivery are more than three times likely to sustained perineal trauma at birth of their second baby.

Investigating the relation between the mode of last delivery and occurrence of perineal trauma, the present study results revealed that most of women in the study sample have their last delivery as spontaneous vaginal delivery and there was a significant relation between the mode of last delivery and occurrence of perineal trauma in subsequent delivery, the researcher attributes this finding to perineal tears and episiotomy were commonly occur in spontaneous vaginal delivery.

Regarding psychological support during labor, the present study result revealed that, women who have inadequate psychological support during their labor were more likely to have perineal trauma during their childbirths. This finding was supported by

http://webmentorlibrary.com/gateway.asp?site=http://www.cochrhrane.org/cochrane/revabstr/AB003766.htm

Hodnett et al.,(2005), who emphasized the fact that women who receive continuous one-to-one support throughout their labor have better outcomes in terms of reduced analgesia requirements, decreased frequency of operative delivery and perineal trauma. This effect was most pronounced when the supporter was not a member of hospital staff who gave support from early in labor and where epidural analgesia was not routinely available. On the same context, ***Gagnon and Wagon (1996),*** asserted that every effort should be made to ensure that all laboring women receive psychological support, not only from those close to them but also from experienced caregivers.

In the present study, it was evident that a statistically significant relation was detected between multiple vaginal examinations and occurrence of perineal trauma. Women who had multiple vaginal examinations during labor were more likely to have perineal trauma during their childbirth. This finding was supported by ***Silber (2005),*** who reported that there are some practices that should be avoided during labor as unnecessary pushing and, multiple vaginal examination, as these are irritating to the perineal tissues.

Concerning the care measures provided during the second stage of labor, such as ironing the perineum between contractions. The present study results revealed that ironing the perineum between uterine contractions had significant relation with occurrence of perineal trauma. The previous finding is in accordance with ***Enkin et al., (2000),*** who reported that, ironing the perineum between uterine contractions helps in prevention of damage to the vagina and rectum during the birth process. Ironing the perineum makes tears or an episiotomy less likely and may reduce the straining sensation during crowning, and familiarizes laboring women with the stretching sensations of birth to enhance relaxation. On the other hand ***Walling (2001) and Stamp et al., (2005)*** stated that, the practice of ironing of the perineal tissue in labor does not increase the likelihood of an intact perineum.

Regarding the correct pushing with each uterine contraction the present study revealed that the majority of women in the intact perineum group pushed correctly with uterine contractions compared to the minority in both group (episiotomy and tears), the difference was statistically significant. This finding is in agreement with ***Eason et al., (2000)***, who highlighted that unnecessary pushing before the parturient woman feels an

urge to push or before the head is reasonably low and is mostly rotated into the optimal orientation for birth; this is commonly encouraged by inpatient care providers. This is best avoided altogether as prolonging the unnecessary phase of pushing may contribute to perineal tearing.

Concerning perineal support and maintaining fetal head flexion**,** although perineal support was used in the majority of most cases in the study sample, the present study finding revealed that there were significant relations between these items and occurrence of perineal trauma. This finding is in agreement with ***Myles (1991),*** who clarified that, in order to maintain perineal integrity during second stage of labor the following should be maintained; keeping the head flexed which prevents sudden expulsion and extension with gentle counter pressure on the occiput until it goes down under the symphysis pubis, which allows gradual extension of the head. Similarly ***Murphy and Feinland (1998),*** reported that perineal management techniques were reported for 106 women. The intact perineum rate was 70% for the study population. Manual support that was used in 72 % of births was associated with intact perineum

Conclusion:-

Based on the findings of the present study, it can be concluded that:- The rate of episiotomy and perineal tears among parturient women in the study was 22.7% for episiotomy and 22% for perineal tears. Risk factors related to episiotomy and perineal tears as revealed by this study findings were age, occupation, low parity, birth interval less than 3 years, birth attendant, mode of last delivery and history of perineal trauma in last delivery.

Women with intact perineum were less likely to have history of perineal trauma in last delivery, have their birth interval more than three years, and have their last delivery conducted by midwives.

The perineal condition on admission, frequency and total number of vaginal examination, insufficient psychological support and bearing down during first stage had significant relation to perineal trauma.

There was a significant relation between time of transition of mother to delivery room, fundal pressure, and occurrence of perineal trauma. Measures such as panting during delivery of fetal head, maintaining flexion of fetal head, ironing the perineum between contractions, perineal support, correct pushing with each uterine contraction, increased the likelihood of intact perineum.

Recommendation:

The nurse should be an educator and counselor for mothers during antenatal period to increase their awareness regarding antenatal exercises (Kegel exercises), and their importance for strengthening of pelvis floor muscles and avoiding obesity during pregnancy. Training programs are needed for health care providers and birth attendants about perineal care measures used during 2nd stage of labor to avoid perineal trauma.

Restrictive instruction for health care providers to avoid the fundal pressure during second stage of labor and to avoid use of episiotomy in first delivery as this increases the incidence of perineal trauma during the next delivery.

The nurse should be an educator and counselor for mothers during antenatal period to increase their awareness regarding perineal massage during the last few weeks of pregnancy; this can help in avoiding perineal trauma during childbirth.

Figure (1): Rate of episiotomy and perineal tears among low risk parturient women in the study sample

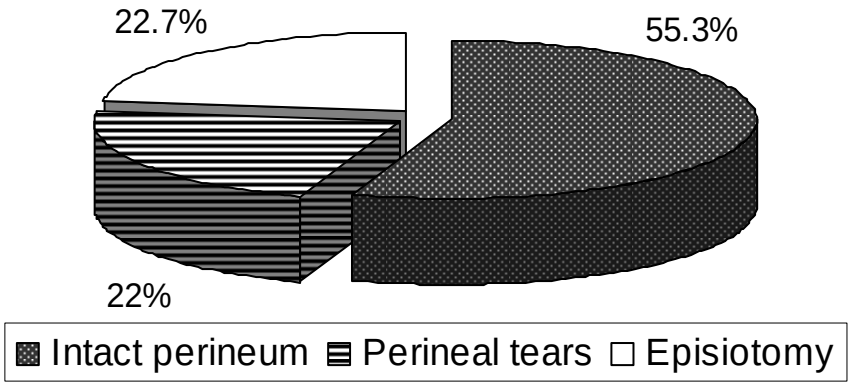

Table (1): Distribution of past obstetric history among parturient women in the study sample according to the condition of the perineum after labor.

Items	Total (150)	Intact (83)		Tears (33)		Episiotomy (34)		X^2	P-value
		No	*%*	*No*	*%*	*No*	*%*		
Parity									
Para 1	80	25	31.2	23	28.8	32	40.0	44.2	0.00*
More than 1	70	58	82.9	10	14.3	2	2.9		
Gravidity									
Gravida 2	71	22	31.0	20	28.2	29	40.8	36.4	0.00*
More than 2	79	61	77.2	13	16.5	5	6.3		
Fetal loss									
No	126	66	52.4	29	23.0	31	24.6	2.9	0.2
Yes	24	17	70.8	4	16.7	3	12.5		

Table (2): Distribution of birth interval, birth attendant and mode of last delivery among parturient women in the study sample according to the condition of the perineum after labor.

Items	Total (150)	Intact (83)		Tears (33)		Episiotomy (34)		X^2	P-value
		No	*%*	*No*	*%*	*No*	*%*		
Birth interval									
≤ 3 years	114	57	50	26	22.8	31	27.2	9.0	0.01
> 3 years	36	26	74.4	7	17.9	3	7.7		
Birth attendant									
Physician	114	51	44.7	31	27.2	32	28.1	21.5	0.00*
Midwife	36	32	88.9	2	5.6	2	5.6		
Mode of last delivery									
Cesarean section	5	4	80.0	1	20.0	0	0.00	13.4	0.00*
Spontaneous delivery	136	79	58.1	28	20.6	29	21.3		
Instrumental delivery	9	0	0.00	4	44.4	5	55.6		

Table (3): Distribution of perineal trauma in last delivery and postnatal care among parturient women in the study sample, according to the condition of the perineum after labor.

Items	Total (150)	Intact (83)		Tears (33)		Episiotomy (34)		X^2	P-value
		No	*%*	*No*	*%*	*No*	*%*		
Perineal trauma in last delivery									
Episiotomy	59	4	6.8	23	39.0	32	54.2		
Perineal tears	9	6	75.0	3	25.0	0	0.00	69	0.00*
None	82	73	80.4	7	15.2	2	4.3		
Post natal care									
Post natal exercises	0	0	0.00	0	0.00	0	0.00		
Sitz bath	68	9	13.2	25	36.6	34	50	8	0.68
Perineal massage	0	0	0	0	0.00	0	0.00		

Table (4): Distribution of admission data among parturient women in the study sample according to the condition of the perineum after labor.

Items	Total (150)	Intact (83)		Tears (33)		Episiotomy (34)		X^2	P-value
		No	*%*	*No*	*%*	*No*	*%*		
Vaginal examination									
Every half hour	89	37	41.6	22	24.7	30	33.7		
Every one hour	61	46	75.4	11	18.0	4	6.6	19	0.00
Total number of PV									
1-5	41	25	61.0	13	31.7	3	7.3		
5-10	93	52	55.9	14	15.1	27	29.0	12.6	0.01
More than 10	16	6	37.5	6	37.5	4	25.0		

Table 5: Distribution of labor date among parturient women in the study sample according to the condition of the perineum after labor.

Items	Total (150)	Intact (83)		Tears (33)		Episiotomy (34)		X^2	P-value
		No	*%*	*No*	*%*	*No*	*%*		
Psychological support									
None	9	6	57.1	0	0.00	3	42.9	57.6	0.00*
Insufficiency done	89	28	31.5	31	34.8	30	33.7		
Sufficiency done	52	49	97.0	2	2.0	1	1.0		
Induction of labor									
Yes	120	65	54.2	24	20.0	31	25.8	3.8	0.1
No	30	18	60.0	9	30.0	3	10.0		
Bearing down during first stage									
Done	57	9	15.8	27	47.7	21	36.8	61.0	0.00
Not done	93	74	79.6	6	6.5	13	14.0		

Table (6): Distribution of care measures provided during second stage of labor to parturient women according to the condition of the perineum after labor.

Items	Total (150)	Intact (83)		Tears (33)		Episiotomy (34)		X^2	P-value
		No	*%*	*No*	*%*	*No*	*%*		
Transition of mother to delivery room									
When the cervix is fully dilated	107	67	62.6	21	19.6	19	17.8	8.5	0.01
When fetal head is on the perineum	43	16	37.2	12	27.9	15	34.9		
Ironing the perineum between contractions									
Done	104	76	73.1	14	13.5	14	13.5	43.2	0.00*
Not done	46	7	15.2	19	41.3	20	43.5		
Perineal support									
Done	119	82	68.9	14	11.8	23	19.3	49.2	0.00*
Not done	31	1	3.2	19	61.3	11	35.5		

Table (7): Distribution of care measures provided during second stage of labor to parturient women according to the condition of the perineum after labor.

Items	Total (150)	Intact (83)		Tears (34)		Episiotomy (33)		X^2	P-valu
		No	%	No	%	No	%		
Panting during delivery of fetal head									
Done	23	15	65.2	3	13	5	21.8	72.8	0 .00*
Not done	127	86	67.7	30	23.6	29	8.7		
Maintain fetal head flexed									
Done	120	79	65.8	18	15.0	23	19.2	28.5	0.00*
Not done	30	4	13.3	15	50.0	11	36.7		
Fundal pressure									
Done									
Not done									

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الملخص العربى

الشق و التمزق العجاني لدى السيدات الماخضات الأقل خطورة بمستشفيات جامعة الزقازيق

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الهدف من هذا البحث:

هو دراسة معدل انتشار الشق العجاني و التمزق التلقائي لدى السيدات الماخضات الأقل خطورة بمستشفيات جامعة الزقازيق وتوضيح العوامل المتعلقة بإصابة العجان وتقيم وسائل العناية التـي تستخدم أثناء الولادة لتقليل إمكانية حدوث إصابة للعجان أثناء الولادة.أجريت على عينـة مـن السيدات مكونة من ١٥٠ سيدة . كانت خصائص العينة كالتالي (سيدات سبق لهن الولادة مـرة واحدة أو أكثروفي المرحلة النشطة للولادة لسن عرضة للولادة القيصرية). تم جمـع البيانـات باستخدام الأدوات التالية (استمارة المقابلة الشخصية للأم .استمارة لمتابعة سير تقدم الـولادة و حالة العجان بعد الولادة.استمارة تقيم لحالة الجنين وكذلك مقيـاس محـيط الـرأس والـصدر للجنين).**ومن خلال هذه الدراسة تبين الآتي :-**

معدل انتشار الشق العجاني و التمزق التلقائي لدى السيدات داخل عينة البحـث هـي ٢٢,٧% للشق العجاني ، ٢٢% للتمزق التلقائي.تتراوح عمر الأمهات ما بين ١٦-٣٦ سـنة و أظهـرت النتائج أن السيدات العاملات والاتى يزيد عمرهن عن ٣٠ سنة لسن أكثر عرضة لإصابة العجان أثناء الولادة.كذلك السيدات اللاتي لم يلدن سوى مرة واحدة هم أكثر عرضة لحدوث شق عجاني وتمزق تلقائي .بالنسبة لتاريخ الولادة السابقة . فقد بينت النتائج أن السيدات التي تقل الفترة مـا بين الولادة السابقة و الحالية عن ٣ سنوات و اللاتي لديهن تاريخ بإصابة العجان فـي الـولادة السابقة هن أكثر عرضة لإصابة العجان في الولادة التالية.بالرغم من أن الغالبية العظمـى مـن السيدات كن يتابعن الحمل . إلا أنه لا توجد علاقة ايجابية بين متابعة الحمل وحـدوث إصـابة العجان .السيدات اللاتي يزيد وزنهن أثناء فترة الحمل عند ١٥كجم أكثر عرضة لحدوث إصـابة العجان.تبين أن الدعم النفسي للسيدات أثناء الولادة يقلل من احتمالات إصابة العجان .تراوح عدد مرات الفحص المهبلي للسيدات داخل عينة البحث ما بين ٢-١٦ مرة . ووجد أن هناك علاقـة ذات دلالة إحصائية بين زيادة عدد مرات الفحص المهبلي وحدوث إصابة العجان.مـن وسـائل العناية التي استخدمت في المرحلة الثانية للولادة والتي تساعد على عدم حدوث إصابة العجـان فقد كان للدفع الصحيح مع الطلق والارتخاء ما بين الطلق ، النهجان أثناء نزول رأس الجنـين ، ثني رأس الجنين أثناء نزولها مع عمل سند العجان. النسبة للجنين فقد بينت النتـائج أن هنـاك علاقة طردية بين زيادة محيط رأس وصدر الجنين و حدوث إصابة العجان.على ضـوء هـذه النتائج **يوصى بالآتي**:

عمل برنامج تدريبي للأمهات أثناء فترة الحمل لتحضير للولادة و التركيز على تمرينات تقويـة عضلات الحوض.عمل برنامج تدريبي عن أهم وسائل العناية بالعجان التي تساعد في إمكانيـة بقاء العجان سليماً.كذلك يجب التركيز على خطورة الضغط على قمة الرحم و تقليل عدد مـرات الفحص المهبلي كذلك أهمية الدعم النفسي للسيدات أثناء الولادة.


رقم الإيداع
١٢٦٢٦