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Job Stress and Coping Strategies Among Nurses Caring For Leukemic Children At 57357 Hospital

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Abstract

Background: Job stress is uncomfortable feeling toward anything that increase physical and mental tension to the nurses. Coping is the process of spending conscious effort and energy to solve personal and interpersonal problems. **Aim:** (This study aimed to assess job stress and coping among nurses caring leukemic children at 57357hospital). **Subjects and Methods:** This study was descriptive research design, A convenient sample was selected while this study was performed on 100 psychiatric nurses working at 57357 hospital and data were collected through using tools 1) Socio-demographic sheet, 2) Stress index Scale and 3) coping inventory scale **Results:** The main results showed that nurses suffered from a different aspects of stress regarding psychiatric nurses ability, the attitude of patient, attitude to nursing and communication with children. And, the result indicated that mostly of nurses were have low coping level toward stress. Furthermore, There was a statistically significant relation between stress, coping and socio demographic data of nurses under study. **Conclusions:** the study concluded that nurses working at 57357hospital had job stress and low coping level. **Recommendations:** This study recommended that, Establish a psycho educational Program for 57357 nurses under study to learn them how to cope positively with their stressors. Training programs and courses would help the 57357 nurse to enhance their stress bearing capacity and also improve their work performance.

Key words: Job Stress, Coping, 57357 Nurses.

Introduction:-

Oncology nurses are challenged with the increased responsibility for coordinating quality child care with limited resources and supports. The real challenge for nurses is to meet the mental, social, cultural, spiritual and developmental needs arising from patient's emotional responses to their diagnosis (Brito & Carvalho, 2020).

Leukemia is cancer of the bone marrow characterized by overproduction of abnormal white blood cells (WBCs) that range from very primitive and immature of nearly normal. The abnormal cells cannot defend the body against micro-organisms and tissue injuries. They also decrease the production of normal red blood

cells, white blood cells, and platelets and infiltrate other organs. Leukemia is a type of cancer that is fatal if untreated (La Russo, 2019).

Job stress is uncomfortable feeling toward anything that increase physical and mental tension to the body. May be positive due to help to accomplish the tasks and may be negative when cause physical and mental harm and the causes of stress called stressors (Craven & Hirnle, 2018).

Coping is the process of spending conscious effort and energy to solve personal and interpersonal problems. In the case of stress, coping mechanisms seek to minimize,



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or tolerate stress and stressors that occur in everyday life (*Wickens et al., 2015*).

There are many types of coping strategies to adapt with stress and the nurse should apply in her life as problem focused and emotion focused categories, many studies explained the effects of these categories to manage stress and alleviate its impact toward life (*Walsh, 2016*).

The nurse caring leukemic children often the first individual who interacts with patient /family during hospitalization or primary care settings, at clinical appointments, at day treatment programs, and during a home visits. This type of work make much stress to her (*Boyd, 2018*).

The nurse who caring leukemic children suffers from many types of stressors as physical, psychological, emotional and social, these types of stressors alter her work, family and life at all negatively (*McPherson et al., 2017*).

The psychiatric nurse has an important role in designing programs to reduce stress and enhance stress coping strategies to nurses who caring leukemic children, apply it in the clinical field and finally evaluate these programs to make recommendations for enhancing the nursing research and applying it in nursing field (*Wickens et al., 2015*).

Significance of the study:-

The incidence of leukemia at children in Egypt is 150 child/1000 of total children with cancer and more risk to die or relapse after complete their treatment so that the nurses caring them are high risk for stress that alter their life at work and within their families (*WHO, 2018*).

More than 80 percent of nurses within the world who caring leukemic children suffer from many types of stressors as physical, psychological, emotional and

social, these types of stressors alter their work, family and life at all negatively (*WHO, 2018*).

So, this study aimed to create psycho educational program to improve the coping strategies of nurses caring with leukemic children and evaluate the effects of this program.

Aim of the Study:-

This study aimed to assess job stress and coping strategies among nurses caring leukemic children at 57357 hospital.

Research Questions:-

This study is based on answering the following question:

1. Are nurses caring leukemic children patients suffering from job stress?
2. What is the level of coping among nurses caring leukemic children at 57357 hospital ?
3. Are there a relationship between Socio-demographic characteristics, job stress and coping among nurses caring leukemic children at 57357 hospital ?

Subjects and Methods:-

Research Design: A Descriptive research design was selected to fulfill the aim of the study and answer the research questions.

Setting of the Study: The study was conducted at 57357 hospital.

Subject: A convenient sample was selected and this study was performed on 100 nurses caring leukemic children at 57357 hospital.



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Data Collection tools:-

Data were collected by using the following tools:

1. Socio-Demographic sheet:-

It was developed by the researcher in Arabic language based on the current literature and the guidance of the supervisors, concerned with socio-demographic variables of the study subjects as Age, sex, address, marital status,

3) Coping inventory scale:-

The cope inventory scale was designed by **Fenny-Collins (2016)** to assess coping strategies of employees especially who work with patients at health care organizations. These strategies include reinterpretation and positive growth, mental disengagement, focus on emotions and venting, use effective social support, effective interaction, denial, religious adaptation, humor, behavioral disconnection, self control, using emotional social support, use of materials, acceptance, suppression of competing activities and planning (each strategy consists of 4 items and total items of scale are 60 items) the scoring system includes less than 35 percent is low coping, from 35 to 70 percent is moderate coping and more than 70 percent is high coping.

Pilot study :-

The pilot study was conducted on 10 nurses at 57357 hospital in order to ensure the clarity of questions and applicability of the tools,

number of family, income, occupation, educational levels, working hours, shift pattern and years of experience.

2-Stress index tool:-

It was designed by **Wickens et al. (2015)** to assess job stress levels for health team who work on hospitals and exposed to different types of stressors include physical (15 items), psychological (15 items), work (20 items), economical (6 items) and family (15 items). (the total items of tool are 71 items) the scoring system includes less than 35 percent is no stress, from 35 to 60 percent is mild, from 61 to 75 percent is moderate and more than 75 percent is high.

Ethical considerations:-

The ethical research considerations in this study included the following:

1. A written initial approval was obtained from the research ethical committee at the Faculty of Nursing, Helwan University.
2. Ethical approval obtained from the Scientific Ethical Committee of 57357 hospital.
3. Individual oral consent was obtained from each participating nurses after explaining the nature and benefits of the study.
4. The researcher cleared the objectives and aim of the study to participating nurses.
5. The researcher maintained anonymity and confidentiality of participating nurses.
- 6- Participating nurses were allowed to choose to participate or not in the study, and were given the right to withdraw at any time from study

**Results:-****Socio-Demographic data of the study nursing (table 1)****Table (1):** Number and percentage distribution of nursing according to their socio-demographic data (N=100).

Socio-demographic data	No.	%
Sex		
Male	40	40.0
Female	60	60.0
Age (years)		
<20 years	0	0
20-30 years	50	50.0
30-40 years	30	30.0
40-50 years	20	20.0
50-60 years	0	0.0
Mean±SD	32.64±6.20	
Social status		
Single	40	40.0
Married	40	40.0
Divorced	10	10.0
Widowed	10	10.0
Qualification		
Bachelor of Nursing	50	50.0
Diploma of the Technical Institute	30	30.0
Diploma of Secondary Technical nursing schools	20	20.0
Other qualifications	0	0.0
Current job		
Director of Nursing	0	0.0
Supervisor of Nursing	10	10.0
Head nurse	10	10.0
Nurse	80	80.0
Years of experience		
1-<5 years	40	40.0
5-<10 years	30	30.0
10-<15 years	30	30.0
15-<20 years	0	0.0
≥20 20 years	0	0.0
Mean±SD	7.65±1.45	
Do you suffer from any health problems?		
Yes	40	40.0
No	60	60.0
If, yes:		
<i>Hypertension</i>	30	75.0



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<i>Diabetes mellitus</i>	10	25.0
Do you take any medications for any disease?		
Yes	40	40.0
No	60	60.0
If, yes:		
<i>Anti hypertension</i>	30	75.0
<i>Anti diabetes mellitus</i>	10	25.0

Table (1) shows that **the mean age** of the studied nursing is 32.64±6.20, regarding **gender** 60% of them are from female, In addition to **social status** 40% & 40% of them are single and married respectively, Mean while **qualification** 50% of them are from bachelor of nursing, regarding **current job** 80% of nursing are nurses, regarding **years of experience** 40% of nursing are 1-<5 years, regarding **health problems** 40% of nursing are yes, as well as **Medications for any disease** 40% of nursing are yes.

Table (2): Number and percentage distribution of nurses according to their stress index about (level of domain by stress index tool) (N=100).

Level of Domain by Stress index		Chi-square test			
		No.	%	χ^2	<i>p-value</i>
1) The organic dimension	Strong agree	60	60.0	43.219	<0.001**
	Agree uncertain	21	21.0		
	Dis agree	19	19.0		
2) The psychological dimension	Strong agree	54	54.0	39.763	<0.001**
	Agree uncertain	24	24.0		
	Dis agree	22	22.0		
3) Work pressures	Strong agree	52	52.0	33.795	<0.001**
	Agree uncertain	25	25.0		
	Dis agree	23	23.0		
4) Economic pressure	Strong agree	54	54.0	21.201	<0.001**
	Agree uncertain	24	24.0		
	Dis agree	22	22.0		
5) Social and familial pressures	Strong agree	59	59.0	35.194	<0.001**
	Agree uncertain	21	21.0		
	Dis agree	20	20.0		
Level of total Stress	No Stress <35%	14	14.0	55.037	<0.001**
	Mild Stress 35-60%	18	18.0		
	Moderate Stress >60-75%	51	51.0		
	High Stress >75%	17	17.0		

p-value >0.05 NS; **p-value* <0.05 S; ***p-value* <0.001 HS



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Table (2) shows that the highest level of organic dimensions of stress are 60%, psychological 54%, work pressures 52%, economic 54% and socio familial 59%.

Table (3): Number and percentage distribution of nurses according to their coping patterns about (level of domain by coping patterns) (N=100).

Level of Domain by Coping Patterns		Chi-square test			
		No.	%	χ^2	<i>p</i> -value
Re-interpretation and positive growth	Low ability to cope <35%	70	70.0	55.359	<0.001**
	Moderate ability to cope 35-70%	16	16.0		
	High ability to cope >70%	14	14.0		
Mental disengagement	Low ability to cope <35%	66	66.0	37.859	<0.001**
	Moderate ability to cope 35-70%	14	14.0		
	High ability to cope >70%	20	20.0		
Focus on emotions and venting	Low ability to cope <35%	73	73.0	47.476	<0.001**
	Moderate ability to cope 35-70%	12	12.0		
	High ability to cope >70%	15	15.0		
Use effective social support	Low ability to cope <35%	72	72.0	21.827	<0.001**
	Moderate ability to cope 35-70%	13	13.0		
	High ability to cope >70%	15	15.0		
Effective interaction	Low ability to cope <35%	68	68.0	38.889	<0.001**
	Moderate ability to cope 35-70%	16	16.0		
	High ability to cope >70%	16	16.0		
Denial	Low ability to cope <35%	74	74.0	68.626	<0.001**
	Moderate ability to cope 35-70%	9	9.0		
	High ability to cope >70%	17	17.0		
Religious adaptation	Low ability to cope <35%	72	72.0	48.600	<0.001**
	Moderate ability to cope 35-70%	10	10.0		
	High ability to cope >70%	18	18.0		
Humor	Low ability to cope <35%	72	72.0	40.701	<0.001**
	Moderate ability to cope 35-70%	11	11.0		
	High ability to cope >70%	17	17.0		
Behavioral disconnection	Low ability to cope <35%	72	72.0	31.709	<0.001**
	Moderate ability to cope 35-70%	12	12.0		
	High ability to cope >70%	16	16.0		



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Self-control	Low ability to cope <35%	69	69.0	24.588	<0.001**
	Moderate ability to cope 35-70%	11	11.0		
	High ability to cope >70%	20	20.0		
Using emotional social support	Low ability to cope <35%	72	72.0	38.946	<0.001**
	Moderate ability to cope 35-70%	12	12.0		
	High ability to cope >70%	16	16.0		
Use of materials	Low ability to cope <35%	69	69.0	43.992	<0.001**
	Moderate ability to cope 35-70%	15	15.0		
	High ability to cope >70%	16	16.0		
Acceptance	Low ability to cope <35%	72	72.0	46.249	<0.001**
	Moderate ability to cope 35-70%	14	14.0		
	High ability to cope >70%	14	14.0		
Suppression of competing activities	Low ability to cope <35%	71	71.0	41.423	<0.001**
	Moderate ability to cope 35-70%	11	11.0		
	High ability to cope >70%	18	18.0		
Planning	Low ability to cope <35%	70	70.0	44.573	<0.001**
	Moderate ability to cope 35-70%	14	14.0		
	High ability to cope >70%	16	16.0		
Level of total Coping Patterns	Low ability to cope <35%	71	71.0	38.002	<0.001**
	Moderate ability to cope 35-70%	13	13.0		
	High ability to cope >70%	16	16.0		

*p-value >0.05 NS; *p-value <0.05 S; **p-value <0.001 HS*

Table(3) shows that, there was lowest levels of coping in reinterpretation and positive growth 71%,planning 70%,acceptance,humor ,use effective social support ,religious adaptation 72% ,in additional to levels of coping low71%,moderate 13% and high 16% according to their according to their total level domain by coping pattern, with (p-value <0.001).

Table (4): Relation between level of stress index of the studied nursing and their socio-demographic data (n=100):-

Socio-Demographic data	Level of total Stress index tool			
	No Stress	Mild Stress	Moderate Stress	High Stress (n=17)



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	(n=14)		(n=18)		(n=51)			
Qualification								
Bachelor of Nursing	7	50.0	9	50.0	27	52.9	7	41.2
Diploma of the Technical Institute	4	28.6	3	16.7	18	35.3	5	29.4
Diploma of Sec. Technical schools	3	21.4	6	33.3	6	11.8	5	29.4
Chi-square test	6.004							
p-value	0.423							
Sex								
Male	6	42.9	8	44.4	21	41.2	5	29.4
Female	8	57.1	10	55.6	30	58.8	12	70.6
Chi-square test	1.019							
p-value	0.797							
Age (years)								
20-30 years	6	42.9	9	50.0	26	51.0	9	52.9
30-40 years	5	35.7	6	33.3	17	33.3	2	11.8
40-50 years	3	21.4	3	16.7	8	15.7	6	35.3
Chi-square test	5.051							
p-value	0.537							
Social status								
Single	7	50.0	7	38.9	21	41.2	5	29.4
Married	4	28.6	6	33.3	23	45.1	7	41.2
Divorced	2	14.3	3	16.7	3	5.9	2	11.8
Widowed	1	7.1	2	11.1	4	7.8	3	17.6
Chi-square test	5.187							
p-value	0.818							
Current job								
Supervisor of Nursing	2	14.3	3	16.7	3	5.9	2	11.8
Head nurse	3	21.4	2	11.1	4	7.8	1	5.9
Nurse	9	64.3	13	72.2	44	86.3	14	82.4
Chi-square test	5.182							
p-value	0.521							
Years of experience								
1-<5 years	5	35.7	9	50.0	21	41.2	5	29.4
5-<10 years	5	35.7	4	22.2	14	27.5	7	41.2
10-<15 years	4	28.6	5	27.8	16	31.4	5	29.4
Chi-square test	2.415							
p-value	0.878							
Health problems								
Yes	4	28.6	6	33.3	23	45.1	7	41.2
No	10	71.4	12	66.7	28	54.9	10	58.8
Chi-square test	1.657							



<i>p-value</i>	0.647							
Medications for any disease								
Yes	5	35.7	8	44.4	21	41.2	6	35.3
No	9	64.3	10	55.6	30	58.8	11	64.7
<i>Chi-square test</i>	0.442							
<i>p-value</i>	0.932							

Table (4) presents that, there were highly statistically significant relation between level of stress index of the studied nursing and their years of experience at (p -value <0.001). In addition to, there are statistically significant relation with qualification, health problems and medication for any disease at ($P < 0.05$). While, there are no significant relation sex, age, social status, current job at ($P > 0.05$).

Table (5): Relation between level of coping patterns of the studied nursing and their socio-demographic data pre and post program ($n=100$).

Socio-Demographic data	Level of total Coping Patterns					
	Low ability to cope ($n=71$)		Moderate ability to cope ($n=13$)		High ability to cope ($n=16$)	
Qualification						
Bachelor of Nursing	34	47.9	7	53.8	9	56.3
Diploma of the Technical Institute	24	33.8	3	23.1	3	18.8
Diploma of Sec. Technical schools	13	18.3	3	23.1	4	25.0
<i>Chi-square test</i>	1.815					
<i>p-value</i>	0.779					
Sex						
Male	26	36.6	9	69.2	5	31.3
Female	45	63.4	4	30.8	11	68.8
<i>Chi-square test</i>	5.477					
<i>p-value</i>	0.065					
Age (years)						
20-30 years	36	50.7	8	61.5	6	37.5
30-40 years	22	31.0	3	23.1	5	31.3
40-50 years	13	18.3	2	15.4	5	31.3
<i>Chi-square test</i>	2.345					
<i>p-value</i>	0.673					
Social status						
Single	34	47.9	3	23.1	3	18.8



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Married	27	38.0	6	46.2	7	43.8
Divorced	4	5.6	2	15.4	4	25.0
Widowed	6	8.5	2	15.4	2	12.5
Chi-square test	10.067					
p-value	0.122					
Current job						
Supervisor of Nursing	5	7.0	1	7.7	1	6.3
Head nurse	4	5.6	4	30.8	2	12.5
Nurse	62	87.3	8	61.5	10	62.5
Chi-square test	8.062					
p-value	0.089					
Years of experience						
1-<5 years	31	43.7	4	30.8	5	31.3
5-<10 years	19	26.8	5	38.5	6	37.5
10-<15 years	21	29.6	4	30.8	5	31.3
Chi-square test	1.695					
p-value	0.792					
Health problems						
Yes	29	40.8	6	46.2	5	31.3
No	42	59.2	7	53.8	11	68.8
Chi-square test	0.737					
p-value	0.692					
Medications for any disease						
Yes	26	36.6	8	61.5	6	37.5
No	45	63.4	5	38.5	10	62.5
Chi-square test	4.095					
p-value	0.393					

Chi-square test; p-value >0.05 NS; *p-value <0.05 S; **p-value <0.001 HS

Table (5) presents that, there was highly statistically significant relation between level of coping patterns of the studied nursing and their medications for any disease at (p-value <0.001). Also, there is statistically significant relation with qualification, years of experience at (P<0.05). While, there are no significant relation sex, age, social status, current job at (P>0.05).



Table (6): Relation between level of total stress index pre-program of the studied nursing and their level of total coping patterns (n=100).

Level of total Coping Patterns	Level of total Stress index tool								Chi-square test	
	No Stress (n=14)		Mild Stress (n=18)		Moderate Stress (n=51)		High Stress (n=17)		x2	p-value
	No.	%	No.	%	No.	%	No.	%		
Low ability to cope (n=71)	8	57.1	12	66.7	41	80.4	10	58.8	6.016	0.421
Moderate ability to cope (n=13)	3	21.4	2	11.1	4	7.8	4	23.5		
High ability to cope (n=16)	3	21.4	4	22.2	6	11.8	3	17.6		

Chi-square test; p-value >0.05 NS

Table (6) presents that, there were no statistically significant association between level of total stress index of the studied nursing and their level of total coping patterns

Discussion:-

The current study aimed to assess the effect of stress and coping strategies for nurses caring leukemic children on children cancer hospital 57357. The results of the current study comparing with recent literatures and other related studies to explain to what extent these results were supported or contradicted by other studies:-

As regards to physical stress of the studied nurses, the present study showed that the majority at the studied nurses usually have that oozes sweat from the hand of the large work load, high blood pressure, high blood sugar, increase of heart rate during the work and pain in the neck respectively, So the researcher suggests that increase number of nursing staff, decrease ratio of patient for each nurse, it will evenly spread the workload and decrease stress levels these findings were in accordance with study done by **Williams (2020) and Jackson (2018)** an Australian study of pediatric oncology healthcare providers who found the majority of the studied nurses suffered from high blood pressure, high blood sugar and heart palpitation during the work.

As regards to psychological stress of the studied nurses the present study showed that the majority at the studied nurses usually irritable quickly for simpler reasons because of work pressure, suffer from oblivion most of the time, feel tightness in the chest for no apparent reason crying children is unbearable and doing with care nursing feel tightness in the chest for no apparent reason, have sense of sadness without justification, This result may be explained that related clinical environment (children cancer unit) considered stressful factor among nurses, this come from children crying, crowding and invasion of personal space, noise, dirty or untidy conditions and badly organized environment. This finding was agreement with **The American Institute of Stress (2017)** findings which showed that work environment (children cancer unit) can be a source of unpleasant or distracting stimuli. Also this finding were agreement with **Bhattacharya (2019)** who found the majority of nurses in a pediatric hospital setting suffered from psychological stress as irritable, oblivion, feel tightness in the chest during working time.

According to work stress related to studied nurses, the present study showed that the majority of the studied nurses are never that visitors entering bother me to ask for their



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cases in the time of the visit, professional relationship characterized by tension with some colleagues, having trouble transport to get to work or get into a home after work respectively. These finding are on agreement with **Kamal. S (2018)** in Taif governmental hospital in kingdom of Saudi Arabia who found that the majority of nurses had tension with their colleagues, during the work had trouble transport to get to work or get into a home after work. So the researcher suggests better relationships with other professions (e.g. physician/nurse) may also relieve stress. This could be achieved through closer integration during parts of training to enhance understanding of each other's roles and clearly define nurses role and responsibilities to avoid conflict related to expectation of nurses

Regarding to financial Stress of the Studied Nurse, the present study showed that the majority of sample is usually bothers me not to apply the law of reward and punishment in the section gingerly by directly responsible. bothers me not to increase the monthly salary for the amount of effort of an annual basis and lack of cash bonus with the size and effort expended work respectively these findings were in an agreement with the findings of **Janet Evans Emery (2020)** who studied sources of stress among pediatric oncology nurses and mentioned that most of the studied nurses have stress refuted to lack salary income for the amount of effort. So the researcher suggests that Increase the monthly salary and provide cash bonus on a regular basis commensurate with the size and quality of work

On the other hand family stress in the studied nurse the present study showed that the majority of sample usually long working times will not help nurses to carry out visits to family and friends not available in the hospital place to care for children while working these findings were disagree with **Czaja (2021)** in European

Journal of Pediatric Nursing Stated that the majority of studied sample had time man agent for caring with their family. He also found that the hospital provided a place for caring of nurses children while working. So the researcher suggests that the organization must provide transportation to get to work or get into a home after work shift and provide in the hospital a place to care for nurse's children while working {nursery school}.

Regarding to their total score of stress for the studied nurse, the present study showed that the majority of the studied nurses have severe stress more than these on minor or moderate stress preprogram in adverse to post program. These findings are agreement with the findings of **Anne E Kazak (2017)** in children hospital of Philadelphia and **Mary Rocker In University of Pennsylvania (2018)** who stated that the majority of nurses working with children cancer had severe stress had higher levels of direct exposure to potentially stressful illness preprogram in adverse to post program. So the researcher suggests that the organization must develop strategies to reduce nursing stress through physical health, mental health, emotional health, intuitional health, and agency support.

In relation to using coping strategies of denial, effective interaction, social support, focus on emotions eventing and mental disengagement, showed that majority of them were used post program more than preprogram these findings were agreement with the findings of **Kathryn (2019)** who developed aprogram to apply these coping strategies for nurses caring leukemic children cancer patients on philadilphia and found application of these strategies is very useful for managing of stress to nurses. So the researcher suggests that using of this strategies are helpful for decrease stress level among nurses.



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Regarding to results of using the coping strategies of religious adaptation, humor, behavioral disconnection, self control and using emotional support in this study for managing stress of nurses caring leukemic children are very useful for relieve and decrease of their stress, respectively these findings of this study are in agreement with results of *Myrelet al., (2020)* who Studied effect of using of these strategies for oncology nurses in France and described that the most of the studied sample usually succeed in managing their stress positively. So the researcher suggests that using of these coping strategies are helpful for managing stress for nurses, While These Findings are Disagreed With *Teresa et al., (2018)* who measures effect of using these coping strategies for Pediatric Oncology Nurse in Musory Hospital in USA stated that the most of studied nurses who work with cancer Department had low responses with using of self-control and behavioral disconnection than other coping strategies.

Regarding to using of planning, acceptance, using of relaxation materials and suppression of competing activities as coping strategies by leukemic children cancer nurses, they could use these strategies well for decrease their stress levels. These findings are in an accordance with the findings of *Purcell (2021)* Who Studied The Relationship between nurses' stress and these coping strategies for nurses caring leukemic children cancer patients in California hospital for children cancer diagnosis and treatment. So the researcher suggests that using of this strategy are helpful for decrease stress level among nurses.

the present study showed that, about two thirds of them their age less than 30 years old, this may be explained by the fact that a lot of nurses working with children cancer unit their age less than 30 years. These finding were agreement with the findings of *Myrel et al., (2020)* who were talk about stressors among nurses who are working in oncology unit

finding which showed that nurses which their age less than 30 year have stress while performing their nursing roles in the hospital environment. While these finding were disagreement with findings of **Luiz Jaroge (2017)** who were talk about stressors for nurses in children cancer unit, Findings which showed that nurse while performing their nursing roles represent that the majority (90.5%) healthcare providers in the hospital environment as regard their age ranged between (30-50) years.

Regarding to the characteristics of studied nurse, the present study showed that the highest percentage of the study subjects was females, This result may be explained by the fact that nursing is a universal feminine profession as well as the enrollment of the male students in this profession was started in the late dedicates. This finding were agreement with **Williams(2020)** talk about occupational stressors in hospice nurses at psychological department university of Hertfordshire finding which showed that female nurses had a higher mean stress score than stress score participant male nurse.

In relation to the characteristics of studied nurses, the present study showed that the highest percentage of the study subjects had baccalaureate degree nurse, this may be higher grade have more responsibility and more pressure from work this finding were agreement with **Mjhocken Berry and Dwilson (2020)** who discussed stressor for nurses and the nurse's reaction for hospitalization nursing intervention available to prevent dominate these stressor, which showed that studied nurse was female had baccalaureate degree

On the other hand marital status, in this finding showed that the majority of the nurses included in the study were married. This result may be explained by the fact that high stress levels result from multiple and complex roles that these women have to perform: wife,



mother, employee and housekeeper in their home. This finding was agreement with **Anne Klassen (2018)** on Canadian institutes of health research who conducted a study which the total sample consisted of 90 percent of nurses as the majority of them are married.

While these finding are disagreement with finding of **Gulati . S (2019)** at the University of Ottawa who found that the majority of nurses who work in children cancer are divorced while only 12% are married.

According to the number and percentage distribution of the studied nurses according to their position and experience years the present study showed that the majority of the studied nurses are staff nurse having experience ranged between 5 < 10 Years. This result may be explained by the fact that work load perceived as a level of stress among nurses. Work load can be represented in deficiency in the number of nursing staff in the shift, dealing with patients who suffer from psychological pressures and the burden of non-nursing duties such as office work and secretarial work. These findings were agreement with the findings of **David (2017)** in the department of pediatrics at the university of British Columbia who found the majority of nurses had stressors related to work with children cancer were staff nurses and they have experience for more than 5 years in these field.

Furthermore, socio-demographic data determinants of the participants in our study (age, marital status and education level) proved to significantly influence stress perception at work. Nurses who are married have higher stress level than other nurses. It has been suggested that such higher stress levels result from multiple and complex roles that these women have to perform: wife, mother, employee and housekeeper in their home.

Conclusions:-

- Based on the study results, it was concluded that nurses caring leukemic children suffering from a different aspects of stress
- Also, there was statistically significant relation between stress, coping and socio demographic data of nurses under study.

• Recommendations :-

- From the previous findings, the following recommendations are suggested:
 - - Establish a psycho-educational program for nurses caring leukemic children at 57357 hospital to learn them how to cope positively with their job stressors.
 - - Training programs and courses would help the nurses to enhance their stress bearing capacity and also improve their job performance.
 - - The Future research should be done with a larger sample size in several oncology hospitals and in a broader geographical area.
 - Continuous workshop for understanding of the unique stressors and difficult situations that have an impact on psychiatric nurses, and for promoting the resilience among them.

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