

## Clinical Setting Related Stressors Perceived By Medical Surgical Nursing Students

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**Abstract:** Clinical training and experience incorporate a great deal with stress for nursing students. Various researches incorporate that the most common sources of nursing student's stressors are interaction with patients, dealing with a new environment, fatigue, being evaluated from instructors and availability of resources. **Aim of the study** to assess the sources of stress perceived by medical surgical nursing student who are firstly contacted with patient in medical surgical clinical setting and investigate the relationship between level of stressors and the student's demographic characters. **Research design:** A descriptive correlational research design was utilized. **Setting:** The study was carried out at Matrouh general hospital (medical and surgical nursing units). **Subjects:** consisted of 88 male and female medical surgical nursing students who met the inclusion criteria. **Tool of the study:** Stressors perceived by medical surgical nursing students at clinical setting assessment questionnaire was used to collect data. **Conclusion:** The study revealed that the most extremely stressors perceived by medical surgical nursing students that they are students in nature. Therefore, they are not trusted from patients and their families. In addition to, exposure to contagious or infectious diseases, physical hospital environment followed by being in emergency situation.

**Key words:** medical surgical nursing, nursing students, stressors.

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### I. Introduction:

Stress is a concept that has a major concern in clinical research. (Pereira, et al., 2014) defined stress as the adverse reaction of people who placed under excessive pressure or any other type of demand. Many researches also defined stress as the insight of incongruity between atmospheric strains and person's ability to meet and cope with these strains (Pereira, et al., 2014 and Birks, et al., 2009).

Nursing is a profession that requires a great deal with stressors. It requires being in a direct contact with healthy and sick people as individuals, families and communities in order to maintain health, treating diseased and prevent complications (Daengthern., 2014; Seyedfatemi, et al., 2007).

In nursing education programs, the curriculums are divided in to two major sections; theory and practice. Clinical practice is very important requirement and experience that have to fulfill by the nursing students in all nursing specialties in order to achieve both diploma and bachelor of nursing. Medical surgical nursing is a specialty of nursing that deals with a huge number of nursing diagnosis and have multiple nursing experience (Dağ, et al., 2019).

The first year nursing student spent the first semester in the laboratory clinical training. The first real clinical experience, contact with patient and hospital environment will begin in the second semester. While the overall aim of the medical surgical nursing course is to help the student to provide a comprehensive nursing care to adult patients with medical or surgical diseases based on scientific knowledge of related definition, pathophysiology, causes, complication and nursing process under a close supervision from a qualified staff in the hospital clinical settings (Ziaullah et al., 2017).

Clinical training and experience incorporate a great deal with stress for nursing students. Various researches incorporate that the most common sources of nursing student's stressors are interaction with patients, dealing with a new environment, fatigue, being evaluated from instructors and availability of resources (Yilmaz., 2016; Evans, Kelly. 2004).

Governmental hospitals are the main clinical setting for training and nursing practice. As government hospital there is lack of facilities for nursing students; the researcher found it necessary to assess the sources of stress perceived by medical surgical nursing student who are firstly contacted with patient in medical surgical clinical setting.

## II. Material & Methods

### Material

#### Research design:

A descriptive correlational study research design was used to assess the sources of stress perceived by medical surgical nursing student who are firstly contacted with patient in medical surgical clinical setting and investigate the relationship between level of stressors and the student's demographic characters.

#### Setting:

The study was carried out in Matrouh general hospital" medical and surgical unites" where the medical surgical nursing students performing their clinical training.

#### Subjects:

The subjects of this study consisted of 88 male and female medical surgical nursing students who are firstly exposed to real hospital clinical practice.

#### Tool:

##### Stressors perceived by medical surgical nursing students at clinical setting assessment questionnaire:

This tool was developed by the researcher after reviewing the current national and international related literature (Kausar., 2014; Yilmaz ., 2016; Ziaullah et al., 2017). Data was collected through self-administered questionnaires of the student' stress perceived at the clinical setting. It was comprised items related to: **Part I:** this part included items related to the sociodemographic data of students such as age, sex, area of residence. **Part III:** included items related to the stressors perceived by the nursing students at clinical settings. It consisted of 25 sentences representing stressors related to dealing with patient, nursing staff and hospital environment, ability to perform nursing responsibilities and being evaluated from instructors.

Scoring system: responses to stress variables at ordinal level (1= not at all stressful, 2 = slightly stressful, 3 = moderately stressful, and 4 = extremely stressful).

#### Method

**Approval** to conduct the study was obtained from the responsible authorities of the Matrouh general Hospital after providing an explanation of the study aim. The **tools** were developed by the investigator based on the recent relevant literature (Kausar., 2014; Yilmaz ., 2016; Ziaullah et al., 2017) Content validity was tested by 5 (professors) experts in the field of medical surgical nursing. Accordingly, all necessary modifications were done. Tool was tested for its **reliability** using Cronbach\_ Alpha Coefficient Statistical test which revealed that the reliability of the tool was 0.828. A **pilot study** was carried out after the development of tool. It was carried out on 8 medical surgical nursing students who were excluded from the study sample; the aim of pilot study was to ensure clarity, applicability, and feasibility of the tools and based on the results of the pilot study, modifications and omissions of some details were done and then the final forms were developed. **Ethical considerations:** The investigator explained the purpose of the study to each nursing student included in the study. Student's formal **consent** to participate in the study was obtained. Confidentiality and anonymity of participants; as well as their right to withdraw from the research at any time were ensured without any consequences. The students were asked to fulfill the questionnaire at the clinical setting. The data obtained are collected and tabulated using appropriate statistical analysis. The data was collected during the second semester of the academic year 2018-2019.

**Statistical analysis:** After data collection, it was computerized. SPSS program version 18 was used for data presentation. The following statistics were applied. **Descriptive statistics:** were presented in the form of frequencies and percentages. **Analytical statistics:** ttest and Persoan correlation to assess the level of significance and correlation. Regarding *P* value, it was considered that: non-significant (NS) if  $P > 0.05$ , Significant (S) if  $P \leq 0.05$ , Highly Significant (HS) if  $P \leq 0.01$ .

## III. Results:

The study revealed that 56.8 % of students were female, approximately all of them were Muslim, and 75% of them were live with their families(**Table I**).Regarding the perceived stressors concerned with dealing with patient and relatives, the results shows that being in emergency situation was experienced as extremely stressful (22.7%), followed by Patient acuity (18.2%), Sex and age of patient (11.4%), patient's physical status (9.1%), relationship with patients' family members(6.8%)and meeting the patient psychomotor requirements (2.3%)(**Table II**).

Concerned with the perceived stressors related to dealing with nursing staff and new hospital environment, the study results revealed that exposure to contagious diseases (34.1%) and hospital physical environment (22.7%) were extremely stressful (**Table III**).

In relation to the stressors perceived regarding the ability to perform the clinical responsibilities, the medical surgical nursing students reported that insufficient time to do things (20.5%), Own abilities in clinical practice (18.2%), fatigue and energy level(15.9%) and possibility to make errors (11.4%) were the most perceived stressors (**Table IV**).

Regarding the perceived stressors related to being evaluated and continuously supervised, the study revealed that being student” not trusted from patients and their families” (45.5%). Being evaluated from instructors and their ability to answer the question of patients and their families (34.1%)were the most moderately perceived stressors (**Table V**).

The study results showed that there was no statistical significant difference between students perceived stressors and their area of residence (P=0.490), sex (P=0.079), religious (P= 0.183)(**Table VI**).

In addition, the study results explained that there were no statistical significant correlation between the student level of perceives stressors and their sociodemographic characteristics as age, sex, religious, place of residence, and GPA of the last term (p= .331, .79, .183, .490, .397) respectively(**table VII**).

**Table I: frequency distribution of the students' sociodemographic characteristics:**

Sociodemographic characteristics		Frequency	Percentage
Sex	Male	38	43.2%
	female	50	56.8%
Religious	Muslim	86	97.7%
	Christian	2	2.3%
Area of residence	with family	66	75.0%
	rented	22	25.0%
GPA of last term	A	2	2.3%
	B	30	34.1%
	B-	16	18.2%
	B+	12	13.6%
	C	2	2.3%
	C+	26	29.5%

**Table II: frequency distribution of perceived stressors related to dealing with patient and relatives:**

Stressors	not at all stressful	slightly stressful	moderately stressful	extremely stressful
1. Interaction with patients	24(27.3%)	42(47.5%)	18(20.4%)	4(4.5%)
2. Being in emergency situations	6(6.8%)	34(38.6%)	28(31.8%)	20(22.7%)
3. Physical status of a patient	18(20.5%)	30(34.1%)	32(36.4%)	8(9.1%)
4. Meeting psychomotor requirements	16(18.2%)	42(47.7%)	28(31.8%)	2(2.3)
5. Communicating with a patient	44(50%)	28(31.8%)	16(18.2%)	0 (0%)
6. Relationship with patients' family members	22(25%)	38(43.2%)	22(25%)	6(6.8%)
7. Sex and age of patient	22(25%)	40(45.5%)	16(18.2%)	10(11.4%)
8. Patient acuity	4 (4.5%)	38(43.8%)	30(34.1%)	16(18.2%)

**Table III: frequency distribution of perceived stressors related to dealing with nursing staff and new hospital environment:**

Stressors	not at all stressful	slightly stressful	moderately stressful	extremely stressful
1. Interaction with staff nurses	23(36.4%)	34(%38.6)	14(15.9%)	8(9.1%)
2. Being in a new environment	20(22.7%)	42(47.7%)	20(22.7%)	6(6.8%)
3. Exposure to contagious diseases	12(13.6%)	22(25%)	24(27.3%)	30(34.1%)
4. Physical environment of hospital	14(15.9%)	20(22.7%)	34(38.6%)	20(22.7%)
5. Embarrassment of speaking in public	48(54.5%)	24(27.3%)	8(9.1%)	8(9.1%)

**Table IV: frequency distribution of perceived stressors related to the ability to perform the clinical responsibilities:**

Stressors	not at all stressful	slightly stressful	moderately stressful	extremely stressful
1. Exposure to experiences for nursing practice	20(22.7%)	42(47.7%)	24(27.3%)	2(2.3%)
2. Own abilities in clinical practice	20 (22.7%)	32(36.4%)	20 (22.7%)	16(18.2%)

3.	<b>Fatigue and energy level</b>	20 (22.7%)	18(20.5%)	36(40.9%)	14(15.9%)
4.	<b>Ability to sleep</b>	28(31.8%)	40(45.5%)	12(13.6%)	8(9.1%)
5.	<b>Insufficient time to do things</b>	10(11.4%)	30(34.1%)	30(34.1%)	18(20.5%)
6.	<b>Own expectations in caring for patients</b>	22(25%)	26(29.5%)	30(34.1%)	10(11.1%)
7.	<b>Academic skills needed for clinical learning</b>	18(20.5%)	38(34.2%)	24(27.3%)	8(9.1%)
8.	<b>Possibility of making an error</b>	10(11.4%)	28(31.8%)	40(45.5%)	10(11.4%)

**Table V: frequency distribution of perceived stressors related to being evaluated and supervised from instructors:**

Stressors	not at all stressful	slightly stressful	moderately stressful	extremely stressful
1. <b>Evaluation by instructor</b>	18(20.5%)	30(34.1%)	30(34.1%)	10(11.4%)
2. <b>Availability of instructor</b>	40(45.5%)	30(34.1%)	14(15.9%)	4(4.5%)
3. <b>Being a student, not trusted by patients or their families</b>	4(4.5%)	14(15.9%)	30(34.1%)	40(45.5%)
4. <b>Can't answer questions of patients or their families</b>	32(36.4%)	22(25%)	30(34.1%)	4(4.5%)

**Table VI: Significance of difference between stressors and student sociodemographic characteristics:**

Sociodemographic characters		N	Mean	Std. Deviation	Levene's Test for Equality of Variances
Sex	male	38	54.26	10.015	T=-1.777- P=0.079
	Female	50	58.08	9.951	
Religious		86	56.65	10.114	T=1.342P=0.183
		2	47.00	.000	
place of residence	With family	66	56.00	10.213	T=-.692- p= .490
	rented	22	57.73	9.876	

**Table VII: correlation between Level of stressors and students' Sociodemographic characteristics:**

Level of stressors perceived by medical surgical nursing students	Sociodemographic characteristics				
		Age	Sex	Religious	Place of residence
	Statistical coefficient	.105	.186	0.143	0.074
P value	.331	0.79	0.183	0.490	

#### IV. Discussion:

Sources of stressors perceived by medical surgical nursing students at the clinical setting considered as a vital issue to be assessed in order to overcome these challenges and facilitate these obstacles (Dağ, et al., 2019; Burnard et al., 2007). Little researches were done in Egypt to assess the stressors faced by nursing students at the real clinical settings.

The participant's sex, religious, and area of residence have no effect on their stress level. The finding indicate that the highest level of stressors perceived from medical surgical nursing students were for being in emergency situation, exposure to contagious diseases, the hospital physical environment, not trusted for patient and family, interaction with patient, patient physical condition, being in a new environment, possibility of making errors, and being evaluated and supervised from nurses and instructors. The results of study carried conducted by(Llapa-Rodriguez et al.,2016) added that nursing students are the most vulnerable to stress. It may be due to their lack of experience, fear from unknown and their need and desire to be competent.

This finding of this study is similar to (Daengthern, 2014) which reports that students experience high level of stress regarding coping with a new situation, such as staff nurses that show hostility, fail to give advice or teaching skill and being supervised and evaluated from instructors and supervisors.

Moreover, The findings of the present study affirms with (Ziaullah et al., 2017) and (Yilmaz., 2016) who documented that criticism of hospital staff as doctors and nurses, fear of making mistakes in the treatment of patients, criticism from the nursing supervisors and lack of opportunity to students to perform nursing skills due to insufficient time, energy or skills are the major sources due to which students frequently feel stress. Similarly, (Seyedfatemi, et al., 2007) and (Ismaile, 2017) concluded that unfamiliar environment, new responsibilities, caring for patients and workload were the most perceives stressors.

The findings in the present study are in opposite with report of (Labrague, 2013) and (AL-BARRAK., 2011) who found that the highest level of stressors were for stressors related to poor grades, and embarrassment from speaking in public.

In addition, The findings in the present study are in accordance with the conclusion of (Kane., 1997) study that making errors, no time, being confronted with emergency situation and workload are sources of stress and also (Kausar., et al. 2014) who stated that exposure to contagious diseases, interaction with patient and nursing staff, being evaluated and the hospital physical environment where have the highest level of stress perceived by the students at the clinical setting. A study conducted by Dağ, et al., 2019 encountered that a poor physical environment in clinics and difficulties with health care team members are a perceived stressors even by the nursing educators.

Regarding the relation between the level of perceived stressors and student demographic characters, the present study showed no significant correlation between the level of stress and student age, sex, area of residence and GPA of last term. These results may be related to approximate age of students in the first academic year, majority of students were lived with their families. The results of this study was in opposite with AL-BARRAK., 2011 who found significant correlation between level of stress and students age.

## V. Conclusion:

**From the findings of the present study, it can be concluded that** the most extremely stressors perceived by medical surgical nursing students that they are students and not trusted from patients and their families, exposure to contagious diseases, physical hospital environment followed by being in emergency situation.

## VI. Recommendations:

The experienced stressors are modifiable and can be treated. Therefore, the imperative for nursing faculty to be aware of the major sources of students' stress and take appropriate measures to lessen the intensity of the stressor as well as to teach students to cope better with the stress. Nursing education should direct to help the student to plan their time, act in emergency situations and protect their self from contagious diseases.

It is clear from these results that there should be careful planning regarding the number of students receiving clinical education. Clinical practice areas should be selected from institutions that have a suitable physical infrastructure to create positive learning environments. Effective communication and cooperation should be provided between clinical teams, instructors and students. Moreover, cooperation protocols should be signed between schools and clinical practice areas.

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