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Awareness of Patient Acuity Tool among Staff Nurses at Selected Tertiary Care Hospitals

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Abstract

INTRODUCTION The investigator investigated the hypothesis that staff nurses who worked in the medical and surgical department had a significant impact on the outcomes of their patients and the mortality rate. Patients and staff nurses are both negatively impacted when there is a mismatch between the clinical severity of a client and the nurse workload indicators. The consequences for the clients get worse as a result of the inflated death rates and relative incidence.

The patients' level of satisfaction drops when they realise that their needs cannot possibly be met by the care they are receiving. When they are unable to meet the requirements of their case in an efficient manner, staff nurses also notice a decline in their level of contentment. The contentment of patients has an impact on the amount of money that healthcare facilities are paid. The level of contentment felt by patients and the sense of community fostered within the organisation of the healthcare institution can both have an impact on the mental health of the nursing staff. Due to the sensitivity of the situation, nursing workers may hold different beliefs. The employment of an objective acuity evaluation method that keeps the balance in the nursing delegation of work in the department of medical-surgical causes a reduction in the number of occasions on which revival events take place.

The goal of the study was to ascertain the degree of awareness existing among nurse staffing concerns in the acute care context regarding the client acuity tool.

3Nurses regularly report a high level of unhappiness with their task environment as a result of the uneven distribution of their duties. The classification and categorization of patients in accordance with an analysis of nursing care requirements and patient demands is the definition of what is known as a patient acuity tool, or PAT for short. Patients in medical and surgical wards may require nursing care ranging from the most basic to the most advanced levels, depending on the severity of their condition. 4Assisting nurses in prioritising and achieving individualization of care for each patient during each shift assignment can be accomplished through the identification of each patient's needs.

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Nurses are the only members of the medical staff that spend the majority of their time interacting directly with patients. The ratio of employed nurses in hospitals is higher than that of other health care professionals; as a result, the care that nurses deliver has a considerable impact on how patients see the quality of their care and how satisfied they feel overall.

1. Need of the Study

Missed nursing care (MNC), acuity, nurse staffing, and patient outcomes have non-linear correlations. The nursing agenda must establish the amounts of nursing staff needed to provide safe care and accomplish patient outcomes.

2. Material and Method

Research Approach :Technique A quantitative descriptive research approach was chosen as the research approach to be used for this study as the research approach.

RESEARCH DESIGN-

The research design that was used was a non-experimental descriptive research design.

SETTING OF THE STUDY. The research was carried out at hospitals in Karad that are considered to be of tertiary care.

POPULATION The population consisted of the staff nurses who worked in the intensive care units of Karad's tertiary care institutions.

The sample population consisted of staff nurses working in various tertiary care facilities across Karad.

SIZE OF THE SAMPLE The study used a sample size of 85 staff nurses from several tertiary care hospitals in Karad. These participants were chosen using sampling selection criteria at the time the data was collected.

The non-probability purposive sampling method was the one that was decided upon for the sampling methodology.

SAMPLING CRITERIA-INCLUSION

CRITERIA: Criteria for inclusion of nurses who were present during the trial. Registered nurses who are employed in a tertiary hospital's intensive care unit (ICU).

EXCLUSION CRITERIA: Registered Nurses who just hold an ANM degree were not considered for inclusion in the study. The study did not include any nurses who had an experience level of one year or less than that threshold.

TECHNIQUES AND INSTRUMENTS FOR THE COLLECTION OF DATA - DESCRIPTION OF THE TOOL: It is divided into two distinct parts.

Section I: This section included the socio-demographic information such as age, gender, number of years working in a specific unit, educational qualification, and years of experience. **Section II:** This section included the employment history information. **Section III:** This section included the medical history information. **Section IV:** This section included the emergency

The Standard Patient Acuity Assessment Tool is covered in Section II.

The first section of this paper presents an examination of the demographic data of the registered nurses who work in the medical-surgical units of tertiary care hospitals, focusing on frequency and percentage distributions.

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Table 1: Frequency Distribution of the staff nurses (n = 85)

Sr. No	Variable	Groups	Frequency	Percentage
1	Age in years	21-25	19	22.35
		26-40	29	34.11
		41-55	16	18.82
		56 and above	21	24.70
2	Gender	Male	38	44.70
		Female	47	55.30
3	Education	Diploma (GNM)	44	51.68
		B.Sc. Nursing	29	34.21
		M.Sc. Nursing	12	14.11
4	Experience in years	< 5	20	23.52
		5-10	38	44.70
		>10	27	31.78
5	No of months/years working in a particular unit	0-12 months	21	24.70
		13months- 2 years	18	21.18
		3 years- 5 years	11	12.94
		> 5 years.	10	11.76
6	Clinical area	General ICU	22	25.88
		Medical ICU	39	45.89
		Surgical ICU	13	15.29
		Pediatric ICU	11	12.94

Table 2: Distribution of the staff nurses according to Age in terms of frequency and percentages

n=85

Variable	Groups	Frequency	Percentage
Age in years	21-25	19	22.35
	26-40	29	34.11
	41-55	16	18.82
	56 and above	21	24.70

According to the age of the staff nurses in the study, as shown in the table above and the figure that follows, 34.11% of them fell into the age range of 26 years to 40

years, 22.35% fell into the age range of 21 years to 25 years, 18.82% fell into the group 41-55 years, and 24.70% fell into the age range of 56 years and above.

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Table 3: Distribution of the staff nurses according to Gender in terms of frequency and percentages

n=85

Variable	Groups	Frequency	Percentage
Gender	Male	35	44.70
	Female	25	55.30

According to the gender, there were 44.70% male staff nurses in the study, while there were 55.30% female staff

nurses. This can be seen in both the table that is above and the figure that is below.

Table 4: Distribution of the staff nurses according to educational qualification in terms of frequency and percentages

n=85

Variable	Groups	Frequency	Percentage
Education	Diploma (GNM)	44	51.68
	B.Sc. Nursing (Bachelors)	29	34.21
	M.Sc. Nursing (Masters)	12	14.11

The table that is located above and the figure that is located below show that, according to education level, in the study of the staff nurses, 51.68% had completed

their general nursing education (GNM), 34.21% had completed their bachelor's degree, and 14.11% had completed their master's degree.

Table.5: Distribution of the staff nurses according to experience in years in terms of frequency and percentages

n=85

Sr. No.	Particulars	Frequency	Percentage%
1.	Experience in years	< 5	20
		5-10	38
		>10	27
		< 5	20

According to the data presented in the table above, the majority of the staff nurses, or 38%, had between 5 and 10 years of experience, 27% had more than 10

years, and 20% had either more than 5 years or less than 5 years of experience, respectively.

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Table 6: Distribution of the staff nurses according to no. of months/ years working in a particular unit in terms of frequency and percentagesn=85

Variable	Groups	Frequency	Percentage
No of months/years working in a particular unit	0-12 months	21	24.70
	13 months- 2 years	18	21.18
	3 years- 5 years	11	12.94
	> 5 years.	10	11.76

According to the number of months or years working in specific units, as shown in the table above and the figure below, 24.70% of workers had 0-12 months of

experience, 21.18% had 13 months to 2 years of experience, 12.94% had 3-5 years of experience, and 11.76% had more than 5 years of experience.

Table 7: Distribution of the staff nurses according to no. of months/ years working in a particular unit in terms of frequency and percentagesn=85

Sr. No.	Particulars	Frequency	Percentage%
1.	Clinical area	General ICU	22
		Medical ICU	39
		Surgical ICU	13
		Pediatric ICU	11

According to the data above, 39% of staff nurses work in medical intensive care units, while 22% work in general intensive

care units, 13% work in surgical intensive care units, and 11% work in paediatric intensive care units.

SECTION II

Table 8: Distribution of the staff nurses according to the level of awareness in terms of Frequency and percentage n=85

Level of awareness	Frequency	Percentage%
Poor (0-10)	13	15.29
Average (11-20)	41	48.23
Good (21-30)	31	36.47

The assessment of the level of awareness regarding the usage of patient acuity tool among staff nurses working in medical-15.29% of class-d workers had low knowledge, 48.23% had an average degree of awareness, and 36.47% had a good level

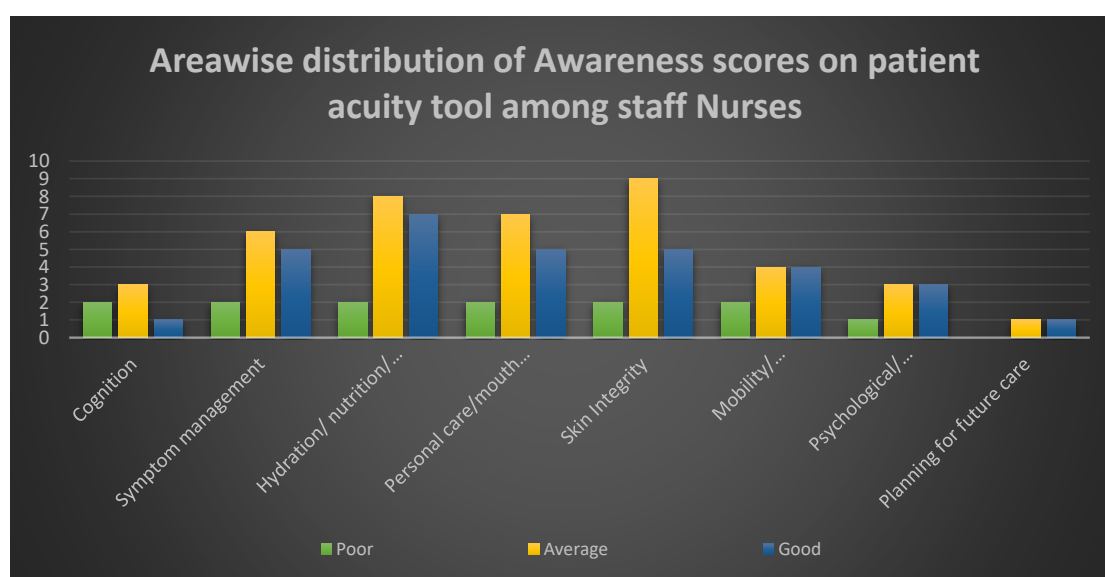
surgical intensive care units in tertiary care institutions is shown in the table and figure that was just shown. of awareness regarding the use of a patient acuity instrument, according to the awareness scores.

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SECTION-III

Table No.9 Frequency and percentage distribution of awareness score related to use of patient acuity tool among staff nurses. (n=85)

Parameters (core care issues)	Poor		Average		Good	
	Frequency	Percentage %	Frequency	Percentage %	Frequency	Percentage %
Cognition	2	2.35	3	3.52	1	1.17
Symptom management	2	2.35	6	7.05	5	5.88
Hydration/ nutrition/ elimination	2	2.35	8	9.41	7	8.23
Personal care/mouth care	2	2.35	7	8.23	5	5.88
Skin Integrity	2	2.35	9	10.58	5	5.88
Mobility/ fall/risk/restraint	2	2.35	4	4.70	4	4.70
Psychological/ spiritual/ cultural	1	1.17	3	3.52	3	3.52
Planning for future care	0	0	1	1.17	1	1.17



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- 2.35% of the staff nurses had low knowledge, 3.52% had average knowledge, and 1.17% had good knowledge on cognition, according to the awareness ratings for the patient acuity assessment.
- 2.35% of staff nurses had poor knowledge, 7.05% had moderate knowledge, and 5.88% had good knowledge about the management of symptoms, according to the awareness scores for the patient acuity tool.
- 2.35% of staff nurses had low knowledge, 9.41% had moderate knowledge, and 8.23% had good knowledge on hydration, nutrition, and elimination, according to the awareness scores for the patient acuity test.
- Personal care and mouth care awareness scores showed that 2.35% of staff nurses had poor knowledge, 8.23% had average knowledge, and 5.88% had strong knowledge. These ratings were based on the patient acuity instrument.

- 2.35% of the staff nurses had low knowledge, 10.58 % had average knowledge, and 5.88% had good knowledge on Skin Integrity, according to the awareness scores for the patient acuity assessment.
- According to the patient acuity tool awareness scores, 2.35 percent of the staff nurses had poor knowledge, 4.70 percent had moderate information, and 4.70 percent had good knowledge about mobility, fall risk, and restraint.
- 8.18% of staff nurses had poor understanding, 3.52% had moderate knowledge, and 3.52% had good knowledge regarding psychological, spiritual, and cultural aspects of the patient acuity instrument, according to the awareness scores.
- The awareness scores of the staff nurses about the patient acuity tool showed that 8.18% of them had low knowledge, 1.17% had moderate knowledge, and 1.17% had strong knowledge regarding Planning for future care.

SECTION IV

Table:10. Association between awareness scores on patient acuity tool with demographic variables n=85

Sr. No	Variable	Fisher's Exact test	P value	Inferences
1	Age in years	2.605	0.786	Not- Significant
2	Gender	1.189	0.386	Not- Significant
3	Education	5.19	0.487	Not- Significant
4	Experience in years	0.123	0.006	Not- Significant
5	No of months/years working in a particular unit	0.178	0.005	Significant
6	Clinical area	0.517	0.0526	Significant

According to the data presented in the table above, the p-value of the association test of awareness scores with demographic characteristics is greater than 0.05 for all demographic variables tested, including age in years, gender, and level of education. It can be concluded that there is not a significant association between these

demographic variables and the awareness score; however, there is a significant association between demographic factors like experience in years, number of working months, and clinical area, and the p-value for these factors is less than 0.05, indicating that they are related.

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3. Discussion With Supportive Studies

The satisfaction of nurses with the method of assignment, which was based on building a relationship between assignment and patient acuity level by accurately measuring the care needs of patients, led to equitable nursing assignment, which in turn resulted in the satisfaction of nurses. It is possible to reduce the likelihood of assigning excessive workloads to one or more nurses during a shift by balancing the workload between scheduled nurses using nurses' assignments. This has the effect of improving both the level of satisfaction experienced by nurses and the quality of care they provide.

In general, a number of characteristics could be associated to nurses' levels of satisfaction; nevertheless, the most prevalent indication for obtaining satisfaction among nurses was workload balance, which boosted nurses' morale and increased their levels of satisfaction. As a result, the primary goal of the current study was to introduce an evidence-based tool (patient acuity tool) for basing nurses' assignment and, as a result, improving nurses' satisfaction with assignment as well as balancing nurses' workloads.

According to the results of the current research, there was a highly statistically significant gap between the two groups in terms of satisfaction with the criteria and outcomes of nurses' assignments. This result provided a clue that nurses in the experimental group who had been included in the training programme about application of the acuity tool and utilising the tool for equitable assignment by first line manager were more satisfied than nurses in the control group who had not been included in the programme and assigned by the traditional method. Specifically, this result provided a clue that nurses in the experimental group who had been included in the training

programme about application of the acuity tool and utilising the tool for equitable assignment by first line

In addition, the experimental group had a high mean and standard deviation regarding their level of satisfaction with their task after receiving training on the deployment of an acuity instrument. Additionally, the vast majority of the nurses in the control group are content with the process of assignment after the intervention was carried out. Therefore, this finding may provide an answer to the research question posed earlier, which posed the query as to whether or not the introduction of acuity tool-based assignment led to a difference in nurses' satisfaction with assignment.

This finding was in agreement with the findings by Elsherbeny and El-Masry, who reported that there was no significant difference between nurses who reported low job satisfaction compared to those who reported moderate or high job satisfaction as regard socio-demographic characteristics. This finding was made in agreement with the findings by Elsherbeny and El-Masry. However, there was a substantial gap in terms of the level of pleasure each nurse had regarding their previous job experiences. In addition, the research conducted by Rahnavard and colleagues found no correlation between demographic factors and levels of job satisfaction. In addition, Tarcan et al. demonstrated that factors such as a person's gender, age, level of education, or marital status did not have a significant impact on any aspect of pleasure.

According to the findings of the current study, the nurses who reported the highest levels of satisfaction with their assignments after the intervention were women between the ages of 30 and 40 years old (i.e., middle-aged nurses), who held a bachelor's degree, had more than 10

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years of experience, and worked in the anaesthesia care intensive care unit.

Variations in socio-demographic factors, work characteristics, and economic levels, in addition to variations in organisational resources and policies that are associated with other studies, can all contribute to differences in the rates of satisfaction that are found in different studies. In general, the level of satisfaction that is found among nurses could be related to a number of different factors.

In contrast to the above findings, the research conducted by Mousazadeh and colleagues led them to the conclusion that older nurses report higher levels of job satisfaction when compared to their younger counterparts. In addition, Tarcan et al. found that the majority of participants who were happy in their jobs were over the age of 41. This finding was based on a survey of participants. On the other hand, the findings of a study that was carried out by Mastaneh and colleagues revealed that younger workers reported higher levels of job satisfaction.

The above findings might be interpreted by Mousazadeh et al. as meaning that when young individuals just beginning their profession as nurses, they might be highly satisfied; nevertheless, when their demands are not addressed, the majority of them will be unsatisfied. [Citation needed] On the other side, as people become older and gain more life experience, their expectations change to become more realistic and, to some extent, attainable, which can result in an increase in the level of job satisfaction they experience.

In addition, the findings of the current study matched with the findings of Mousazadeh et al., who indicated a substantial difference between the levels of job satisfaction experienced by men and women in the workplace:

The current study found that nurses with bachelor degrees had a higher level of job

satisfaction compared to nurses with other types of qualifications. This may be because bachelor degree nurses were taught about evidence-based practise, and as a result, they frequently look forward to evidence that will guide their practise.

4. Conclusion

The results of this research showed that many nurses on staff lacked the necessary expertise to properly use the patient acuity tool, particularly with regard to discharge planning and psychological concerns. Thus, it is essential that staff nurses in medical and surgical ICUs receive better education through ongoing in-service training in order to increase both their knowledge and their efficiency in the workplace. A worker's prior knowledge and the areas in which they need more training should inform their in-service training plan. This research shows that as our understanding grows, so do our best practises.

5. Implications

The study has important implications for nursing education, service, administration, and research, according to the researcher.

Nursing Practice-

Nurses can provide in-service education and demonstrations for staff nurses, especially in ICUs, and other healthcare personnel to improve their knowledge and quality of nursing care.

ICU in-charges should train newly hired personnel on patient acuity tools and evaluate bedside practises.

Nursing education

Teachers should develop staff nurses' skills utilising patient acuity tools.

Using advanced technology like LCD projectors and power point presentations improves instructor effectiveness and helps staff nurses understand and develop an interest in education.

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The nurse administrator can provide facilities for instructional programmes to improve ICU documentation knowledge and practises.

Nursing research- The study's findings will help the hospital evaluate staff nurses' knowledge and practises on using a patient acuity instrument.

Limitation:

The study was limited to chosen hospitals and a small population.

This research focuses on private hospital nurses.

Recommendation

1. A large-scale investigation can generalise findings.
2. A study can be done and assessed using interactive learning sessions, structured training programmes.
3. Study the effects of patient acuity tools on health professionals' work stress.

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References And Bibliography

- [1] Allen, S.B., "The nurse-patient assignment: Purposes and decision factors," JONA: The Journal of Nursing Administration, 45 (12). 628-35. Dec.2015.
- [2] Cathro, H. A, "Practical guide to making nurses' assignments in acute care," JONA: The Journal of Nursing Administration, 43 (1). 6-9. Jan.2013
- [3] Sir, M., Dundar, B., Steege, L., and Pasupathy, K., "Nurse-patient assignment models considering patient acuity metrics and nurses' perceived workload," Journal of Biomedical Informatics, 55. 237-248. Jun.2015.
- [4] Allen SB. Nurse-Patient Assignments: Moving Beyond Nurse-Patient Ratios for Better Patient, Staff and Organizational Outcomes. March 2016.
- [5] Allen, S., "The nurse-patient assignment process: What clinical nurses and patients think," Medsurg Nursing, 27 (2). 77-82. Mar. 2018.
- [6] Johnston, M., Arora, S., Anderson, O., King, D., Behar, N. and Darzi, A., "Escalation of care in surgery: a systematic risk assessment to prevent avoidable harm in hospitalized patients," Annals of surgery, 261 (5). 831-8. May.2015.
- [7] Tomic, K., "Nursing assignments based on patient acuity: The road to nursing job satisfaction," Evidence-Based Practice Project Reports, 106, Valparaiso, Indiana: Valparaiso University. 2017. Available: <http://scholar.valpo.edu/ebpr/106>.
- [8] Hui, J., Chen, L., Yan, G., Haiyan, L. and Wenqin, Y., "Status of nurse staffing and nursing care delivery in Pudong, Shanghai," Contemporary Nurse, 50 (1). 104-114. Jan.2015.
- [9] Shinde M, Anjum S. Educational Methods And Media For Teaching In Practice Of Nursing. Sneha Publication India (Dombivili). 2007.
- [10] Shinde M, Anjum S. Introduction to Research in nursing. Sneha Publication India (Dombivili). 2007
- [11] Potdar N, Shinde M B, Sadare S. Barriers to Comprehensive Care in Intensive Care Units. International Journal Of Science and Research. 2016;5(8):447-50.
- [12] Shinde MB, Hiremath P. Stressors, level of stress and coping mechanism adopted by undergraduate nursing students. International Journal of Nursing Education. 2014 Jul;6(2):231-3.

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- [13] Mohite N, Shinde M, Gulavani A. Job satisfaction among nurses working at selected tertiary care hospitals. *International Journal of Science and Research (IJSR)*. 2014;3(6).
- [14] Shinde MB, Mohite VR. A study to assess knowledge, attitude and practices of five moments of hand hygiene among nursing staff and students at a tertiary care hospital at Karad. *Int J Sci Res*. 2014;3(2):311-21.
- [15] Gulavani A, Shinde M. Occupational stress and job satisfaction among nurses. *International Journal of Science and Research (IJSR)*. 2014 Apr;3(4):733-40.
- [16] Shinde M, Mane SP. Stressors and the coping strategies among patients undergoing hemodialysis. *Int J Sci Res*. 2014;3(2):266-76.
- [17] Shinde M, Anjum S. Effectiveness of demonstration regarding feeding of hemiplegia patient among caregivers. *International Journal of Science and Research (IJSR)*. 2014;3(3):19-27.
- [18] Desai A, Shinde M, Mohite V. Knowledge of mental illness among caregivers of alcoholic's. *International Journal of Science and Research (IJSR)*. 2014;3(4):550-7.
- [19] Vortherms, J., Spoden, B. and Wilcken, J., "From evidence to practice: Developing an out-patient acuity-based staffing model," *Clinical Journal Oncology Nursing*, 19 (3), 332-337. Jun.2015.
- [20] Kidd, M., Grove, K., Kaiser, M., Swoboda, B. and Taylor, A., "A new patient-acuity tool promotes equitable nurse-patient assignments," *American Nurse Today*, 9 (3). 1-4. Mar.2014.
- [21] Chiulli, K., Thompson, J. and Reguin-Hartman, K.L., "Development and implementation of a Patient Acuity Tool for a Medical-Surgical Unit," *Academy of Medical-Surgical Nurses*, 23 (2). 9-12. 2014.
- [22] Liang, B. and Turkcan, A., "Acuity-based nurse assignment and patient scheduling in oncology clinics," *Health Care Management Science*, 19 (3). 207-226. Sep.2016.
- [23] Leineweber, C., Chungkham, H.S., Lindqvist, R., Westerlund, H., Runesdotter, S., Smeds Alenius, L. and Tishelman, C., "Nurses' practice environment and satisfaction with schedule flexibility is related to intention to leave due to dissatisfaction: A multi-country, multilevel study," *International Journal of Nursing Studies*, 58. 47-58. Jun. 2016.
- [24] Cohen, L., Manion, L., & Morrison, K. (2007). *Research methods in education*. (6th ed.). New York: Routledge.
- [25] Sobaski, T., *The Effect of Implementation of an Acuity Tool for Medical- Surgical Patients in an Acute Care Setting*. Scholarly Project. Andrews University Spring 2017.
- [26] Morrow, A. & Powell, J. (2018). Patient acuity tool on a medical-surgical unit. *American Nurse Today*, 13(4). Retrieved from <https://www.americannursetoday.com/patient-acuity-meidcal-surgical-unit>.
- [27] Acar, I., "A decision model for nurse-to-patient assignment. Doctoral dissertation". 2010. Available: <https://scholarworks.wmich.edu/dissertations/492/>.
- [28] Thomasos, E., Brathwaite, E., Cohn, T., Nerey, J., Lindgren, C. L. and Williams, S., "Clinical partners' perceptions of nurses' assignments according to acuity," *MEDSURG Nursing*, 24 (1). 39-45. 2015.
- [29] Al-Dweik, Gh. And Ahmad, M., "Matching Nursing Assignment to Patients' Acuity Level: The Road to Nurses' Satisfaction," *Journal of*

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- Nursing Measurement, 27 (1). 34-47. May.2019.
- [30] Riboldi, C., Macedo, A., Mergent, T., Dias, V., Costa, D., Malvezzi, M., et al., "Classification of Patient Care Complexity: Cloud Technology," Studies in health technology and informatics, 225, 834-835. 2016.
- [31] Health Research and Educational Trust, Failure to Rescue Change Package: Chicago, IL: Health Research & Educational Trust, 2016, (2016a). Available: www.hret-hen.org.
- [32] Elsherbeny, E.E. and El-Masry, R., "Job Satisfaction Among Nurses Working in Mansoura University Hospital: Effect of Socio-Demographic and Work Characteristics," Egyptian Journal of Occupational Medicine, 42 (2). 227-240. May.2018.
- [33] Rahnavard, F., Sadati, A., Hemmati, S., Ebrahimzade, N., Sarikhani, Y., Heydari, S. and Lankarani, K., "The impact of environmental and demographic factors on nursing job satisfaction," Electron Physician, 10 (4). 6712-6717. Apr.2018. Semachew, A., Belachew, T.,
- [34] Tesfaye, T. and Adinew, Y. M., "Predictors of job satisfaction among nurses working in Ethiopian public hospitals, institution-based cross-sectional study," Human Resources for Health, 15 (1). 15- 31. Dec.2017.
- [35] Momennasab, M. and Parvizy, S Mousazadeh, S., Yektatalab, S.,, "Job satisfaction and related factors among Iranian intensive care unit nurses,". BMC research notes, 11 (1). 823. Dec.2018.