



KNOWLEDGE, ATTITUDE, AND SKILLS OF NURSES POSTED TO THE EMERGENCY DEPARTMENT AT A TERTIARY CARE TEACHING HOSPITAL IN UTTARAKHAND, INDIA: A CROSS-SECTIONAL STUDY

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ABSTRACT

Introduction: The Emergency Department (ED) is the point of first contact for any critically ill patient, needing immediate medical attention. The ability of the nurses to handle emergencies with care and confidence can make a big difference in a patient's comfort level. **Aim:** To study the knowledge, attitude, and skills of nurses posted to the Emergency Department towards patient care at a tertiary care teaching hospital. **Material And Methods:** This cross-sectional study was conducted for one month at the Emergency Department of Himalayan Hospital, Dehradun. All 53 nurses, posted to the emergency department were requested to participate in this study. Data was collected with the help of a pre-tested structured questionnaire. The skill set of nurses was assessed with the help of an observational checklist. Statistical analysis was performed using the data analysis tool in Microsoft Excel and Statistical Package for Social Sciences version 23.0. Pearson coefficient of correlation (r-value) and p-value were calculated. The level of statistical significance was set at 5% ($P < 0.05$). **Results:** 33 (68.75%) nurses were females as compared to 15 (31.25%) in the male category. A maximum number of nurses 25 (52%) were in the experience range of < 5 years. Age and experience showed a high positive r-value of 0.94 and a statistically significant P-value of (< 0.001). Correlation between years of experience and knowledge revealed a positive correlation, with an r-value of 0.35 and a statistically significant p-value = 0.02 (< 0.05). It was observed that 66.5% of participants displayed a positive attitude, 10.8% were neutral and 22.7% displayed a negative attitude. Overall 70.3% of participants had good nursing skills, and 60% of nurses displayed good behavioural and communication skills. **Conclusion:** The study provides valuable insight into the Knowledge, attitude, and skills of nursing staff posted to the emergency department. The study concluded that the knowledge, attitude, and skills of nursing staff posted in the emergency department were satisfactory.

KEYWORDS : Attitude, Emergency nurses, Knowledge, Skills, Triage

INTRODUCTION

Emergency medical services (EMSs) are an integral part of the healthcare system. [1] They cover a range of healthcare services including prehospital medical services, emergency services in the hospital, and the trauma system which usually acts as the coordinated network of trauma care. [2] The most important part of the prehospital emergency system is an efficient and operational human force to deal with various types of crashes and diseases. [3, 4] Emergency nurses are at the forefront of hospital service provision and are often the first to interact with and care for ill and injured patients.

A triage nurse in emergency services must be a good decision-maker because it will affect the outcome of triage. The over or underestimation of triage level reflects on the quality of care, utilizing unnecessary resources, affects the length of stay, and could affect the mortality rate. However, the correct triage decision indicates the high quality of care, appropriate allocating of patients, and suitable time for care delivered by the emergency triage nurse [5] Triage is putting the patient in the right place at the right time to receive the right level of care and the allocation of appropriate resources to meet the patient's medical needs. This place of the hospital allows for the assignment of the caretaker to a suitable assessment and treatment place. [6, 7, 8] Therefore, employing experienced and skilled nurses for triage in the emergency department, and teaching them how to perform triage properly can prevent many deaths, disabilities, and additional costs of treatment. [9]

Emergency nurses' knowledge, skills, attitude, and practice are serious factors for evaluating nursing care quality in the ED. [10, 11] Knowledge plays an important role in the attitude and behaviour of personnel. Therefore, it is necessary to plan for the promotion of knowledge, change their attitude, create a desirable performance, and examine their knowledge and attitude to have purposeful educational programs. [12] Promoting knowledge, awareness, and skill in this group facilitates the provision of emergency services. [13] Communication, that is, how staff members interact with patients and visitors, plays an important role in how a patient recovers from an experience of illness. [14]. The Joint Commission on Accreditation of Healthcare Organizations found that poor communication is the

number one root cause of sentinel events; thus, poor communication in the emergency department can affect patient safety and satisfaction. [15]

Clinical skills can be hard or soft skills. Hard skills are more technical abilities that are specific to the profession, such as reading vital signs, collecting samples, and administering medication. On the other hand, soft skills, such as communication, are important for interacting with patients and gathering enough information to diagnose and treat them accurately. Healthcare personnel may use communication skills when gathering patient history, sharing the treatment plan with the medical team, and diagnosing the patient. The nursing staff in the ED must maintain a positive attitude. Many nursing staff refuse to work in the emergency department because of strenuous schedules, requirements, and responsibilities. [16] This study aimed to assess the knowledge, attitude, and skills of nurses posted in the emergency department with the objective of determining their further training needs

METHODOLOGY

Study Design

This is a prospective cross-sectional study.

Study Setting

This study was conducted in the emergency department at Himalayan Hospital which is a 1200-bed tertiary care teaching hospital of the Himalayan Institute of Medical Sciences (HIMS) in Uttarakhand, North India.

Period Of Study

The duration of the study was one month.

Sampling Procedure:

All 53 nurses posted to the emergency department were taken for the study.

Ethical Clearance

Ethical clearance was obtained from the Institutional Ethics Committee (reference no. HIMS/RC/2022/308). Informed consent was obtained from all the participants for the study.

Inclusion Criteria:

The study included male and female nurses in the age group from 20 to 50 years who were posted to the emergency department in all three shifts. Nurses newly inducted into the department and those with up to 25 years of experience were included in the study.

Exclusion Criteria:

As nurses with more than 25 years of experience get absorbed in administrative positions and are not directly involved in patient care, they were excluded. Nurses who were on long leave or maternity leave and deployed in other wards or departments of the hospital were also excluded.

Data Collection Methodology And Parameters Studied:

Data was collected from primary and secondary sources.

Primary Source –

Data was collected with the help of a structured questionnaire which was given to all the nurses. However, five nurses could not complete the questionnaire and had to leave midway due to some urgent personal commitments. A pilot study was done with 10 nurses who were posted to other critical care areas of the hospital to determine the relevance, content, context, and comprehension of the questionnaire by the participants. The questionnaire was validated and Cronbach's alpha score was calculated. The questionnaire incorporated questions on knowledge (attached as Appendix 'A') and attitude (attached as Appendix 'B'). The skills were assessed with the help of a skill observational checklist. The questionnaire used in the study consisted of three sections:

The first section collected demographic information such as age, gender, work experience, and educational qualification. The name of the nursing staff was not included to maintain anonymity.

The second section of the questionnaire focused on assessing the knowledge of the nursing staff and was MCQ-based. Each correct response was awarded 1 point, indicating good knowledge, while an incorrect response received 0 points. For this section, Cronbach's Alpha was calculated to be = 0.71

The third section addressed the attitude of the nursing staff. Responses were measured using a 5-point Likert scale, ranging from "Strongly Disagree (1) to "Strongly Agree (5). Scale 1 & 2 depicted a negative attitude, scale 3 depicted neutrality, and scale 4 & 5 depicted a positive attitude. For this section, Cronbach's Alpha was calculated to be = 0.72

Skill observational checklist: The skill checklist comprised of 3 parts- Nursing Skills, Communication Skills, and Behavioural Skills. The skills assessment was carried out by using a five-point Likert scale (5=excellent, 4=good, 3=average, 2= fair, and 1=poor respectively). Scales 1 & 2 depicted poor skills, scale 3 depicted neutrality, and scales 4 & 5 depicted good skills

● **Secondary source** - Available literature, surveys, and records.

Statistical analysis

The statistical analysis was done using the data analysis tool in Microsoft Excel and the Statistical Package for Social Sciences version 23.0. Researchers also calculated demographic details, standard deviation, Pearson coefficient of correlation (r), and p-value.

Table-3: Assessment Of Knowledge (N=48)

Questions	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15	Q16	Q17	Q18	Q19	Q20	mean
Correct answers	46	46	46	31	37	41	42	48	33	35	45	37	28	30	39	43	38	22	38	42	38
Incorrect answers	2	2	2	17	11	7	6	0	15	13	3	11	20	18	9	5	10	26	10	6	10
Total	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48
% of correct answers	95.8	95.8	95.8	64.6	77.1	85.4	87.5	100.0	68.8	72.9	93.8	77.1	58.3	62.5	81.3	89.6	79.2	45.8	79.2	87.5	80%
% of incorrect answers	4.2	4.2	4.2	35.4	22.9	14.6	12.5	0.0	31.3	27.1	6.3	22.9	41.7	37.5	18.8	10.4	20.8	54.2	20.8	12.5	20%

Analysis of the correlation between knowledge and years of experience revealed a positive r-value of 0.35 and a statistically significant P value = 0.02 (< 0.05). The analysis of the same is depicted in [Table-4].

Table-4: Correlation Between Knowledge And Experience

SUMMARY OUTPUT					
Regression Statistics					
Multiple R			0.34743	r = 0.35	
R Square			0.12071	p = 0.02	
Adjusted R Square			0.10159		
Standard Error			2.60489		

The level of statistical significance was set at 5% (p < 0.05).

RESULTS**Demographic Distribution:**

The nursing staff was grouped in the age bracket of 20-30 years, 31-40 years, and 41-50 years. It was observed that 32 (66.67%) nurses were in the age group of 20-30 years. The gender distribution revealed that 33 (68.75%) nurses were females as compared to 15 (31.25%) nurses in the male category. It was observed that the maximum number of nurses 25 (52%) had a professional experience of < 5 years. Analysis of the educational level of nursing staff revealed that 26 (54%) nurses had nursing diplomas and 22 (46%) had a bachelor's degree in nursing. The demographic distribution of the study population is depicted in [Table-1].

Table-1: Demographic Distribution (N=48)

Criteria	N	%
Age (in years)		
20–30	32	66.67
31–40	15	31.25
41–50	1	2.08
Gender		
Male	15	31.25
Female	33	68.75
Year of experience		
Less than 5 year	25	52
6-10 year	14	29
11-15 year	7	15
16-20 year	1	2
21-25 year	1	2
Educational level		
Nursing Diploma	26	54
Bachelor's Degree	22	46
Post Graduate Degree	0	

Age range, frequency, mean age, and standard deviation of male and female nursing staff were calculated. Of the 32 nurses in the age group of 20-30 years, 26 were females and 6 were males. However, in the age group of 30-40 years, seven were females and eight were males. These details are in [Table-2].

Table-2: Mean Age And Standard Deviation (N=48)

Age (in years)		Female (N = 33)			Male (N =15)		
group	age range	frequency	Mean age (years)	SD	frequency	Mean age (years)	SD
1	20-30	26	29.69	2.81	6	25	2.1
2	30-40	7	33.57	1.84	8	34.1	1.89
3	40-50	0	0	0	1	45	

Abbreviation: SD (Standard Deviation)

Assessment Of Knowledge:

A minimum percentage of 50% was set for qualifying knowledge criteria. A score of <50% indicated poor knowledge, 50-60% indicated satisfactory knowledge, 60-80% indicated good knowledge and >80% indicated very good knowledge. On average, the number of participants rendering correct answers in this study was 80%. Statistical analysis of correct and incorrect answers along with the percentage is depicted in [Table-3].

Observations	48				
ANOVA					
	df	SS	MS	F	Significance F
Regression	1	42.8489	42.8489	6.3148	0.0155
Residual	46	312.1302	6.7854		
Total	47	354.9792			
	Coefficients	Standard Error	t Stat	P-value	Lower 95%
Intercept	14.6477	0.6497	22.5460	1.67149E-26	13.3400
Year of Experience	0.2028	0.0807	2.5129	0.02	0.0404

Abbreviation: df (degree of freedom), SS (sum of squares), MS (Mean square), F (F statistic), p value (probability value)

Assessment Of Attitude:

The attitude of the nursing staff was assessed by administering a questionnaire comprising 10 questions which were marked on a Likert scale of 1-5. Scale 1 (poor) and 2 (fair) were taken as negative attitudes. Scale 3 (average) represented neutrality, while scale 4 (good) and 5 (very good) represented positive attitude. It was observed that 66.5% of participants displayed a positive attitude, 10.8% stayed neutral and 22.7% displayed a negative attitude. This is depicted in [Table-5]. Analysis of educational qualifications in the positive attitude category revealed that 40% had a diploma in nursing while 60% possessed a degree in nursing. This infers that the participants having a Bachelor's degree in nursing have more positivity in their attitudes.

Table - 5: Attitude Of Staff (N=48)

Attitude	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Mean	%
Positive	42	9	28	43	45	47	7	40	12	46	32	66.5
neutral	4	3	9	4	3	1	6	5	15	2	5	10.8
Negative	2	36	11	1	0	0	35	3	21	0	11	22.7

Correlation Between Age, Experience, Knowledge, And Attitude:

Correlation along with the level of statistical significance (p-value) was calculated for these variables and is depicted in [Table-6]. It implies that the level of experience and knowledge increases with age and has a positive correlation. The level of knowledge also increased with an increase in professional experience ($r = 0.35$, $p < 0.05$). However, the attitude had no significant correlation with age, experience, or knowledge.

Table - 6: Correlation (r) And 'p' Values

	Age	Experience	Knowledge	Attitude
Age	1			
Experience	$r = 0.94$ $p < 0.001$	1		
Knowledge	$r = 0.34$ $p < 0.002$	$r = 0.35$ $p < 0.02$	1	
Attitude	$r = 0.02$ $p > 0.05 (0.84)$	$r = 0.02$ $p > 0.05 (0.86)$	$r = 0.19$ $p > 0.05 (0.18)$	1

Table - 8: Nursing Skills (N=48)

Nursing skills	Triage of patient	Handling of MLC Patient	Dressing of Wounds	Medication administration	Recording of patient information on the nursing assessment sheet.	Vital signs Monitoring	Ability to give CPR	Oxygen administration	Mean/ average	SD
Poor	4 (8.33%)	9 (18.8%)	1 (2.1%)	3 (6.3%)	2 (4.2%)	7 (14.6%)	2 (4.2%)	7 (14.6%)	4 (9.1%)	2.92
Average	12 (25%)	9 (18.8%)	11 (22.9%)	10 (20.8%)	10 (20.8%)	9 (18.8%)	7 (14.6%)	11 (22.9%)	10 (20.6%)	1.55
Good	32 (66.7%)	30 (62.5%)	36 (75%)	35 (72.9%)	36 (75%)	32 (66.7%)	39 (81.3%)	30 (62.5%)	34 (70.3%)	3.24
Total	48 (100%)	48 (100%)	48 (100%)	48 (100%)	48 (100%)	48 (100%)	48 (100%)	48 (100%)	48 (100%)	

Assessment Of Communication Skills:

It was observed that a highest of 35 (72.9%) participants displayed good skills in the use of nonverbal expressions. The overall mean/average of participants displaying good communication skills was 60%. The statistical details of communication skills are shown in [Table-9].

Table - 9: Communication Skills (N=48)

Communication skills	Soft skills while dealing with the patients	Ability to explain requirements to staff members	Ability to communicate medico-legal requirements	Addressing patient queries about treatment	Ability to give a patient listening	Ability to interact with doctors	Encouraging patients to express problems effectively	Use of nonverbal expressions	Mean	SD
Poor	23 (47.9%)	4 (8.3%)	11 (22.9%)	4 (8.3%)	17 (35.4%)	6 (12.5%)	7 (14.6%)	6 (12.5%)	9.8 (20%)	6.9

Skill Assessment:

Eight criteria each were observed by the researchers in nursing, communication, and behavioural skills with the help of an observational checklist. Details of the observed criteria in each of the skills are elaborated in [Table -7]. Participants who were marked 'strongly agree or agree' were categorised as having "good skills" and those who were marked 'disagree or strongly disagree' as "poor skills".

Table - 7: Skill Criteria

Skills	Criteria
Nursing skills	● Triaging of patients. ● Handling MLC patients. ● Dressing of wounds ● Medication administration. ● Recording patient information on the nursing assessment sheet. ● Vital signs monitoring. ● Ability to give CPR. ● Oxygen administration
Communication skills	▶ Soft skills ▶ Ability to explain requirements to staff members. ▶ Ability to communicate medicolegal requirements. ▶ Addressing patient's queries. ▶ Ability to listen to patients. ▶ Ability to interact with doctors. ▶ Encouraging patients to express their problems freely. ▶ Use of non-verbal expressions.
Behavioural skills	● Care for the patient ● Promptness in attending to the patient on arrival. ● General behaviour towards the patient. ● Attention to hygiene standards. ● Empathy towards the patient. ● Teamwork with other nursing staff. ● Teamwork with medical and paramedical staff. ● Response to patient calls.

Assessment Of Nursing Skills:

A highest of 39 (81.3%) participants displayed good skills in their ability to give cardiopulmonary resuscitation (CPR) followed by 36 (75%) in the dressing of wounds. The overall mean/average of participants displaying good nursing skills was 34 (70.3%). The details of nursing skills are shown in [Table-8].

Average	6 (12.5%)	13 (27.1%)	13 (27.1%)	9 (18.8%)	12 (25.0%)	9 (18.7%)	8 (16.6%)	8 (16.7%)	9.8 (20%)	2.6
Good	19 (39.6%)	31 (64.6%)	24 (50%)	35 (72.9%)	19 (39.6%)	33 (68.8%)	33 (68.8%)	34 (70.8%)	28.5 (60%)	6.8
Total	48 (100%)	48 (100%)	48 (100%)	48 (100%)	48 (100%)	48 (100%)	48 (100%)	48 (100%)	48 (100%)	

Assessment Of Behavioural Skills:

It was observed that the highest of 35 (72.9%) participants displayed good skills towards promptness to attend to the patient and work as a team with medical staff. The overall mean/average of participants displaying good behavioural skills was 59.4%. The statistical details of behavioural skills are shown in [Table-10].

Table -10: Behavioural Skills (N=48)

Behavioural skills	Care for the patient	Promptness in attending to the patient on arrival	General behavior towards the patient	Attention to hygiene standards	Empathy towards the patient	Team work with other nursing staff	Teamwork with medical and paramedical staff	Response to the patient's call	Mean	SD
Poor	10 (20.8%)	4 (8.3%)	14 (29.2%)	22 (45.8%)	15 (31.3%)	6 (12.5%)	2 (4.2%)	12 (25%)	10.6 (22.1%)	6.6
Average	8 (16.7%)	9 (18.8%)	6 (12.5%)	13 (27.1%)	8 (16.7%)	9 (18.8%)	11 (22.9%)	7 (14.6%)	8.9 (18.5%)	2.2
Good	30 (62.5%)	35 (72.9%)	28 (58.3%)	13 (27.1%)	25 (52.1%)	33 (68.8%)	35 (72.9%)	29 (60.4%)	28.5 (59.4%)	7.2
Total	48 (100%)	48 (100%)	48 (100%)	48 (100%)	48 (100%)	48 (100%)	48 (100%)	48 (100%)	48 (100%)	

DISCUSSION

The proficiency in knowledge, attitudes, and skills exhibited by nursing staff in the emergency department plays a crucial role in shaping the quality of patient care and their overall experience. Nurses may know the role of communicative skills in clinical practice; however, he/she may not apply this knowledge, as their attitude may be a negative one. Due to this fact, it is essential, not only to pass on knowledge but also to shape appropriate attitudes at every level of education. [17, 18]

The questionnaire in this study was given to 52 nurses out of which only 48 (92%) responded. The highest number of nurses 32 (66.67%) were in the age group of 20-30 years with mean/average age of 29.1 ± 4.89 years. Gender analysis revealed that 33(68.8%) of staff were females. The mean experience of nurse staff was 6.1 ± 4.9 years. This aligns with the study by Biresaw et al. in which 91.5%, of nurses who responded, had a mean/ average age of 30 ± 4.3 years, 59% were females and the mean experience was 6 ± 3.42 years. [19] The findings observed in the study by Kaseka, P.U et al. revealed that 47% of the nurses were in the age group of 20-30 years and 79.2% were females. 59.6% of nurses had experience of less than five years and 78.7% had a bachelor's degree. [20] However, in our study, 52% of nurses had less than five years' experience and only 46% had a bachelor's degree.

In the present study, analysis of age and experience revealed a high positive correlation with Pearson correlation coefficient $r = 0.94$ and a statistically significant p -value of $0.001 (< 0.05)$. This aligns with the study conducted by Beier ME et al. which also revealed a high positive correlation between age and experience with a correlation coefficient $r = 0.85$ and a statistically significant p -value of (< 0.001) . [21]

The mean score for knowledge in our study was 80%. This is higher than the mean score of 66.6% observed in the study by Kiyancicek Z et al and the study conducted by Nandasena G et al which showed that 69% of nurses had good knowledge. [22, 23] Analysis of the correlation between experience and knowledge in our study revealed a positive correlation coefficient $r = 0.35$ and a statistically significant p -value of $0.02 (< 0.05)$. This aligns with the study findings of Al-Busaidi IS et al. who also revealed a weak positive correlation of $r = 0.14$ and a statistically significant p -value of $0.04 (< 0.05)$. [24]. Almarzooq AM et al. also observed a statistically significant relationship between years of experience and knowledge. [25]

Analysis of the attitude of nurses in this study revealed a positive attitude in 66.5% of nurses which is slightly lower than the study findings of Griffin M et al. who observed positive attitudes in 74.8% of nurses. [26] However, the study conducted at Babylon Teaching Hospitals by Hayder MO et al. observed, a positive attitude in 17.8% of nurses, while 28.7% stayed neutral and 53.5% showed a negative attitude. [27] It was observed in our study that nurses having bachelor's degrees have more positive attitudes than diploma holders. This observation is consistent with the study findings by Kahsay DT et al. [28]. In our study, a weak positive correlation existed between scores of knowledge and attitude with $r = 0.19$ but not a significant p -value of $0.18 (> 0.05)$. This is in variance with the study by Shakeri K et al. who

observed a significant positive correlation with $r = 0.186$ and a statistically significant p -value of < 0.05 . [29]

The skills of the nursing staff were analysed under the subhead of nursing skills, communication skills, and behavioural skills. It was observed that overall 34 (70.3%) participants had good nursing skills, 28 (60 %) had good communication skills and 28 (60 %) participants had good behavioural skills. In our study, the nursing skills and communication skills had a positive correlation with $r = 0.38$ and a statistically significant p -value of $0.007 (< 0.05)$. This was in conformance with the findings of Wieke Noviyanti L et al. who obtained an r value $= 0.33$ and a p -value of $0.01 (< 0.05)$. [30]

Our study findings revealed that the nursing skills and behavioural skills showed a positive r -value $= 0.42$ and a statistically significant p -value $= 0.003 (< 0.05)$. However, the correlation between behavioural and communication skills revealed a weak positive correlation with $r = 0.24$. The p -value was calculated to be $0.09 (> 0.05)$ which was not statistically significant. This observation is a variance from the study findings of Kirca N et al. which observed a moderate positive correlation between behavioural and communication skills ($r = 0.5$, $P < 0.01$). [31]

The hospital administration authorities were informed of the observations brought out by the study. The following interventions have been recommended to improve behaviour skills and communication skills among nurses:

- Provide skill-based training in communication methods.
- Training on behavioural techniques to confront and address disrespect.
- Methods of reporting disrespectful behaviours.
- Training on conflict resolution techniques.
- Conducting team building workshops at periodic intervals.

Limitation(s)

The study was conducted on nurses posted in the emergency department only. Hence the sample may not be representative of all nurses. In addition, the data collection tool used for this study used a self-reporting structured questionnaire, allowing possible response bias from each responder.

CONCLUSION(S)

This study was aimed to, evaluate the knowledge, attitude, and skills of nursing staff posted to the emergency department. The results indicated that 80% of participants possessed good knowledge and 66.5% showed a positive attitude. The study brought out that 70.3% of participants had good nursing skills whereas communication skills and behavioural skills were rated at 60% respectively. The findings of the study indicated that imparting good knowledge can contribute to a positive attitude and the development of proper skills.

Additional Information

Human Subjects: Informed Consent was obtained from all participants in the study.

Animal Subjects: Study did not involve animal subjects or tissues.

Conflict of Interest: Nil

Financial Support: Nil

Appendix-A

ASSESSING KNOWLEDGE

1. What does START stand for?

- (a) Simple Triage and Rapid Treatment
- (b) Start Tasking and Rapid Tracking
- (c) Simple Tasking and Rapid Termination
- (d) Start Talking and Reassess Treatment

2. The GCS does not assess which area of response to stimuli.

- (a) Auditory
- (b) Verbal
- (c) Eye Opening
- (d) Motor

3. What does yellow indicate in triage?

- (a) Patient who has life-threatening injuries
- (b) Patient whose treatment may be delayed for a limited period
- (b) Patient with minor injuries
- (d) Patient who has injuries requiring extensive treatment

4. The correct sequence of resuscitation in BLS is

- (a) Compression, Airway, Breathing
- (b) Airway, Breathing, Compression
- (c) Breathing, Airway, Compression
- (d) Airway, Compression, Breathing

5. The initial time of shifting the patient to the respective ward is generally-

- (a) within 24 hours
- (b) within 24-48 hours
- (b) within 48-72 hours
- (d) within 72- 96 hours

6. A medico-legal situation is where there is-

- (a) Allegation
- (b) Confession
- (b) Suspicion of injury
- (d) All of the above

7. The correct order of hand washing is-

- i. Wet your hands and apply enough liquid soap
- ii. Rub the back of the palm
- iii. Cup your fingers
- iv. Rub your palm with your fingers
- v. Rub palms together
- vi. Clean the thumb
- vii. Interlink your fingers

- (a) v, iii, iv, i, ii, vii, vi
- (b) i, v, ii, vii, iii, vi, iv
- (c) i, ii, iii, iv, v, vi, vii
- (d) vii, vi, v, iv, iii, ii, i

8. The Doctor orders a medication orally. What is the route of administration?

- (a) Per rectum
- (b) By Mouth
- (c) Under the tongue
- (d) Via Nasogastric Route

9. High-risk medications are kept under-

- (a) Single lock
- (b) Double lock
- (c) Triple lock
- (d) No lock

10. What does QID stand for?

- (a) Five times per day
- (b) Two times per dose
- (c) Four times a week
- (d) Four times a day

11. Surgical site infection (SSI) is classified as

- (a) Hospital Acquired Infection
- (b) Home Acquired Infection
- (c) Community Acquired Infection
- (d) Self-Acquired Infection

12. Which of the following requires calibration?

- (a) BP instrument
- (b) Weighing Machine
- (c) All of the above
- (d) None of the above

13. _____ moments of hand hygiene according to WHO

- (a) 7
- (b) 6
- (c) 5
- (d) 4

14. There is an electrical fire and there is an urgent need to use the fire extinguisher. Which class of fire extinguisher should be used?

- (a) Class A
- (b) Class B
- (c) Class C
- (d) Class E

15. Number of Patient identification marks written for MLC cases are-

- (a) 1
- (b) 2
- (c) 3
- (d) 4

16. DNR stands for

- (a) Do Not Re-instate
- (b) Death Not Required
- (c) Do Not Revive
- (d) Do Not Resuscitate

17. Which of the following legal documents acknowledges that the patient is rejecting prescribed medical care?

- (a) Durable Power of Attorney
- (b) Advanced Directive
- (c) Informed Consent
- (d) Refusal of Treatment

18. Social Scrub timing is-

- (a) 10 seconds
- (b) 20 seconds
- (c) 60 seconds
- (d) 30 seconds

19. What % of hypo chloride solution is used for treating soiled linen?

- (a) 0. 5%
- (b) 1%
- (c) 5%
- (d) 2%

20. Blood spill should be cleaned in what direction/motion

- (a) Inside to Outside in a circular motion
- (b) Outside to Inside in a circular motion
- (c) 'Z' Direction
- (d) Any Direction

Appendix 'B'

ASSESSING ATTITUDE

1. It is appropriate for team members to offer assistance to their counterparts who may be tired or stressed.

- 1) Strongly Disagree
- 2) Disagree
- 3) Neither Agree nor Disagree
- 4) Agree
- 5) Strongly Agree

2. Nurses have enough knowledge of their nursing work and do not need any knowledge of research.

- 1) Strongly Disagree
- 2) Disagree
- 3) Neither Agree nor Disagree
- 4) Agree
- 5) Strongly Agree

3. I feel safe and secure from getting any infection after hand hygiene practice.

- 1) Strongly Disagree
- 2) Disagree
- 3) Neither Agree nor Disagree
- 4) Agree
- 5) Strongly Agree

4. Increased workload affects infection control practices.

- 1) Strongly Disagree
- 2) Disagree
- 3) Neither Agree nor Disagree
- 4) Agree
- 5) Strongly Agree

5. If the condition of the patient is critical, the treatment should be started immediately and the paperwork should be done after the treatment

- 1) Strongly Disagree
- 2) Disagree
- 3) Neither Agree nor Disagree
- 4) Agree
- 5) Strongly Agree

6. Crash cart content must be checked periodically as per the policy

- 1) Strongly Disagree
- 2) Disagree
- 3) Neither Agree nor Disagree
- 4) Agree
- 5) Strongly Agree

7. I am not willing to provide emergency care to RTA because I could apply the wrong treatment and cause harm.

- 1) Strongly Disagree

- 2) Disagree
- 3) Neither Agree nor Disagree
- 4) Agree
- 5) Strongly Agree

8. Non-followers of biomedical waste management rules must be reported.

- 1) Strongly Disagree
- 2) Disagree
- 3) Neither Agree nor Disagree
- 4) Agree
- 5) Strongly Agree

9. I experience anxiety and fear while working with the covid-19 patients.

- 1) Strongly Disagree
- 2) Disagree
- 3) Neither Agree nor Disagree
- 4) Agree
- 5) Strongly Agree

10. I am well aware of our hospital policy on handling MLCs.

- 1) Strongly Disagree
- 2) Disagree
- 3) Neither Agree nor Disagree
- 4) Agree
- 5) Strongly Agree

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