# RESULT

**Results of the study will be presented in the following parts:**

**Part I:** Characteristics of the studied nurses (Table 1).

**Part II:** Nurse's knowledge about patient undergoing cardiac catheterization patients (Tables 2, 3, 4, 5).

**Part III:** Nurse's practice about nursing care for the patients undergoing cardiac catheterization patients (Table 6, 7).

**Part IV:** The relation between nurse's knowledge to their demographic characteristics (Tables 8, 9, 10, 11).

**Part V:** The relation between nurse's practice to their demographic characteristics (Tables12, 13, 14, 15).

**Part VI:** The relation between nurse's total knowledge and total practices (Table 16).

**Part I:** Characteristics of the studied nurses.

**Table (1):** Number and percentage distribution of the studied nurses according to their characteristics**.**

| Item | | Number 50 | Percentage % |
|---|---|---|---|
| **Age group** | ≤25 | 16 | 32 |
| | >25-30 | 13 | 26 |
| | >30 | 21 | 42 |
| **Marital Status** | Married | 41 | 82 |
| | Unmarried | 9 | 18 |
| **Qualification** | Diploma | 32 | 64 |
| | Diemploma + Specialty | 6 | 12 |
| | Bachelor | 7 | 14 |
| | Bachelor + post graduate | 5 | 10 |
| **Experience years** | <5 | 10 | 20 |
| | 5-10 | 19 | 38 |
| | >10 | 21 | 42 |
| **Pervious Training Program** | Yes | 20 | 40 |
| | No | 30 | 60 |

This table illustrated that the highest percent (42%) in age group > 30, as regard to years of experience, the highest percent (42%) in experience groups>10, as regards qualification, the highest percent is (64%) were diploma degree .As regards marital status the highest percent in (82%) were married., as regards training the highest percent (60%) did not receive any training (60%).

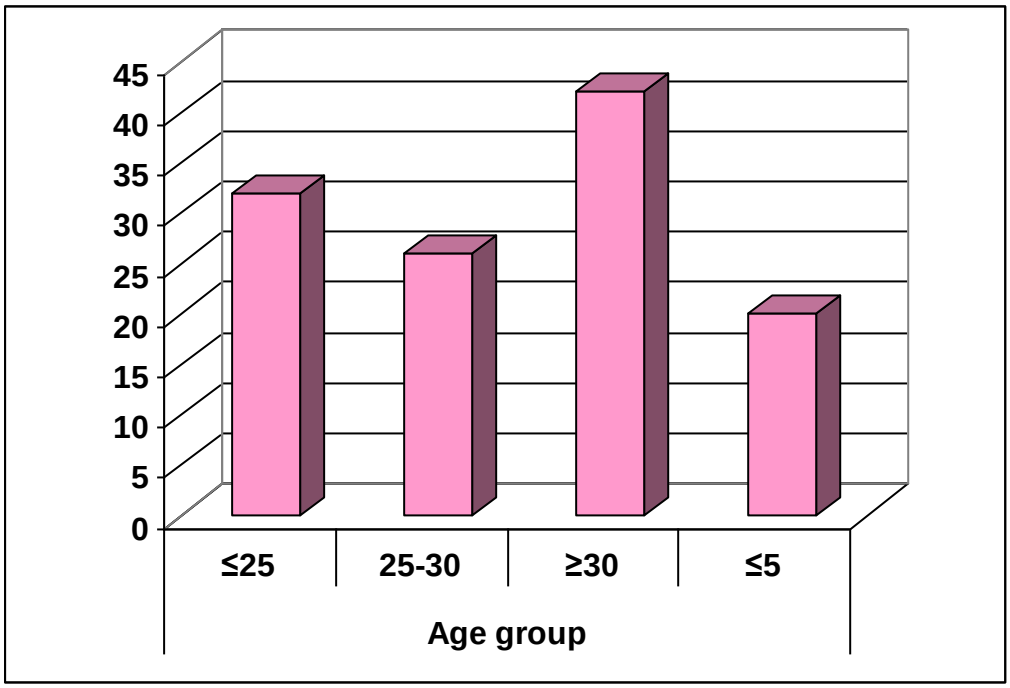


***Fig. (1):*** Shows nurses age group, high percent of nurses in age group ≥30 years.

**Part II:** Knowledge of Nurse's working with patient undergoing cardiac catheterization

**Table (2):** Nurses knowledge regarding patients undergoing cardiac catheterization.

| N=50 / Item | Satisfactory | | Unsatisfactory | | Chi-square | |
|---|---|---|---|---|---|---|
| | N | % | N | % | $X^2$ | P-value |
| Basic knowledge | 27 | 54.00 | 23 | 46.00 | 0.320 | 0.572 |
| Role of nurse before cardiac catheterization | 35 | 70.00 | 15 | 30.00 | 8.000 | 0.005* |
| Role of nurse during cardiac catheterization | 14 | 28.00 | 36 | 72.00 | 9.680 | 0.002* |
| Role of nurse after cardiac catheterization | 37 | 74.00 | 13 | 26.00 | 11.520 | 0.001* |
| Role of nurse in prevention complication after cardiac catheterization | 22 | 44.00 | 28 | 56.00 | 0.720 | 0.396 |
| Role of nurse in health education after cardiac catheterization | 30 | 60.00 | 20 | 40.00 | 2.000 | 0.157 |

This table illustrated that the highest percent (74%) is satisfactory in nurses knowledge about nurse knowledge after cardiac catheterization and the highest percent (72%) is unsatisfactory in nurse knowledge about role of nurse during cardiac catheterization with highly significant difference in all knowledge.

**Table (3):** Mean score of nurse's knowledge regarding to cardiac catheterization

| Knowledge Items | Mean ± SD |
|---|---|
| 1.Basic knowledge | 8.020 ± 1.270 |
| 2.Nurses knowledge before cardiac catheterization know. | 10.980 ±1.134 |
| 4.Nurses knowledge after cardiac catheterization | 4.380 ± 0.667 |
| 5.Nurses knowledge in prevention complication after cardiac catheterization | 3.860 ±1.325 |
| 6.Nurses knowledge in health education after cardiac catheterization | 4.540 ± 0.734 |
| **Total knowledge** | 36.700±20794 |

This table illustrated that the high mean score (10.980 ±1.134) in nurses knowledge before cardiac catheterization. While the lowest mean score is (3.860±1.325) in nurses knowledge in prevention complication after cardiac catheterization.

**Table (4):** Nurse's knowledge about prevention of complication

| N=50 / Items | Satisfactory | | Un satisfactory | | Chi-square | |
|---|---|---|---|---|---|---|
| | N | % | N | % | $X^2$ | P-value |
| 1. Common bleeding site | 50 | 100.00 | 30 | 60,00 | 9.680 | 0.002 |
| 2. Patient instruct after cardiac catheterization | 36 | 72.00 | 14 | 28.00 | 9.680 | 0.002 |
| 3. Dangerous signs should be reported | 8 | 16.00 | 42 | 84.00 | 23.120 | 0.000 |
| 4. The first day patient instructed | 31 | 62.00 | 19 | 38.00 | 2.880 | 0.090 |
| 5. Dressing for insertion site | 29 | 58.00 | 21 | 42.00 | 1.280 | 0.258 |
| 6. Patient complain from cough or constipation | 39 | 78.00 | 11 | 22.00 | 15.680 | 0.000 |

This table illustrated that more than tow third of nurses have satisfactory level of knowledge about common bleeding sites .while nearly the majority (84%)have unsatisfactory level of knowledge about dangerous signs should be reported.

**Table (5):** Nurses knowledge about health education for patient

| Nurses Knowledge about health education | | | | | | |
|---|---|---|---|---|---|---|
| **Items** **N=50** | **Satisfactory** | | **Unsatisfactory** | | **Chi-square** | |
| | **N** | **%** | **N** | **%** | **$X^2$** | **P-value** |
| 1-Instruction for patient after discharge | 38 | 76.00 | 12 | 24.00 | 13.520 | 0.000 |
| 2-Instruct patient about follow up | 49 | 98.00 | 1 | 2.00 | 46.080 | 0.000 |
| 3-Instruction about medication | 39 | 78.00 | 11 | 22.00 | 15.680 | 0.000 |
| 4-Instruct patient about dangerous signs | 49 | 98.00 | 1 | 2.00 | 46.080 | 0.000 |
| 5-Instruct patient about center of follow up | 48 | 96.00 | 1 | 2.00 | 46.080 | 0.000 |

This table illustrated that the satisfactory in nurses knowledge about health education after cardiac catheterization with high statistical significant difference.

**Part III:** Nurses performance about nursing care for patient undergoing cardiac catheterization .

**Table (6):** Mean score for practice role of nurses in cardiac catheterization unit.

| Practice role | Mean ± SD |
|---|---|
| Practice role of nurse before cardiac catheterization | 15.04 ± 3.33173 |
| Practice role of nurse during cardiac catheterization | 10.52 ± 1.90852 |
| Practice role of nurse after cardiac catheterization | 12.96 ± 1.80656 |
| Total practices | 38.520 ± 5.530 |

This table shows that mean score of practice role of nurses in cardiac catheterization unite with high mean score (15.04±3.33173) in practice role of nurse before cardiac catheterization. While low mean score (10.52±1.90852) in role of nurse during cardiac catheterization

## Percent distribution of practical nursing role (before-during –after) cardiac distribution

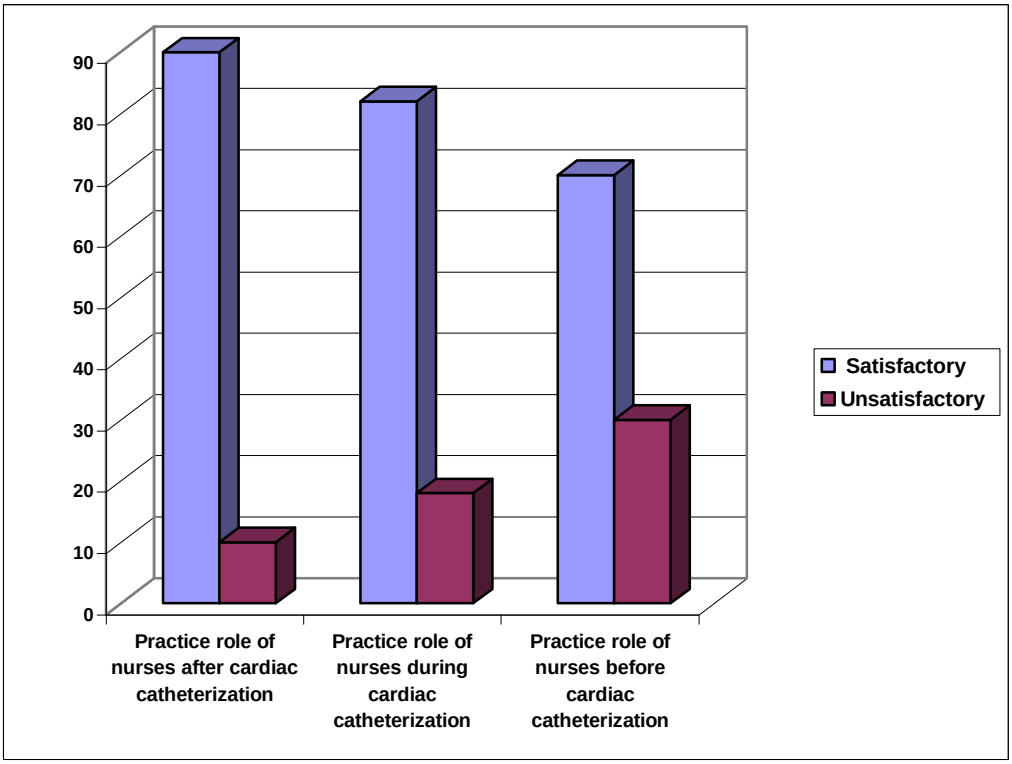


***Fig.(2 ):*** This figure illustrated that most of nurses had satisfactory level of practice after cardiac catheterization while nearly one third had unsatisfactory level of practice before cardiac catheterization

**Part IV**: The relation between nurses knowledge and their characteristics.

**Table (7):** Relations between nurse's total knowledge and age group of nurses in cardiac catheterization unit.

| Knowledge (knowledge score 94) | Age | |
|---|---|---|
| | **r** | **P-value** |
| Basic knowledge | 0.410 | >0.05 |
| Role of nurse before cardiac catheterization | 0.765 | <0.001* |
| e of nurse during cardiac catheterization | 0.568 | <0.001* |
| Role of nurse after cardiac catheterization | 0.734 | <0.001* |
| Role of nurse in prevention complication after cardiac catheterization | 0.718 | <0.001* |
| Role of nurse in health education after cardiac catheterization | 0.617 | <0.001* |
| Total knowledge | 0.952 | <0.001* |

This table shows that there was a relation between total knowledge and age group of nurses in cardiac catheterization unite with highly statistical significant difference at P value (<0.001*) in all knowledge except basic knowledge.

**Table (8):** Relation between nurse's knowledge and their qualification

| Item / N=50 | Dieploma | Diemploma + Specialiist | Bachelor | Bachelor + post graduate | ANOVA | |
|---|---|---|---|---|---|---|
| | Mean ± SD | Mean ± SD | Mean ± SD | Mean ± SD | F | P-value |
| Basic knowledge | 6.31 ± 1.51 | 8.33 ± 1.21 | 9.14 ± 0.38 | 9.20 ± 0.45 | 15.22 | <0.000* |
| Role of nurse before cardiac catheterization | 7.19 ± 2.85 | 11.50 ± 0.55 | 11.29 ± 0.76 | 11.20 ± 0.45 | 11.85 | <0.000* |
| Role of nurse during cardiac catheterization | 2.91 ± 0.59 | 3.50 ± 1.23 | 4.57 ± 1.27 | 4.20 ± 0.45 | 10.93 | <0.000* |
| Role of nurse after cardiac catheterization | 2.91 ± 1.20 | 3.83 ± 0.98 | 4.43 ± 0.54 | 5.00 ± 0.00 | 8.69 | <0.000* |
| Role of nurse in prevention complication after cardiac catheterization | 2.34 ± 0.83 | 3.00 ± 1.10 | 4.29 ± 1.11 | 4.60 ± 0.89 | 15.33 | <0.000* |
| Role of nurse in health education after cardiac catheterization | 2.72 ± 1.78 | 4.00 ± 1.10 | 4.43 ± 0.54 | 5.20 ± 0.45 | 5.81 | <0.000* |
| Total knowledge | 5.20 ± 0.45 | 24.38 ± 4.74 | 34.17 ± 1.47 | 38.14 ± 0.69 | 42.53 | <0.000* |

The highest mean of total knowledge was among Bachelore &post graduate nurses. and it also revels that .There was a highly significant statistical difference among different group.

**Table (9):** Relation between nurse's knowledge and their marital statues of nurses in cardiac catheterization unit.

| Total knowledge | Marital status | | | |
|---|---|---|---|---|
| | Un married | Married | T-test | |
| | Mean ± SD | Mean ± SD | t | P-value |
| 1. Basic knowledge | 8.05 ± 1.34 | 7.89 ± 0.93 | 0.43 | >0.67 |
| 2. Role of nurse before cardiac catheterization | 10.85 ± 1.17 | 11.56 ± 0.73 | -2.31 | <0.03* |
| 3. Role of nurse during cardiac catheterization | 4.95 ± 1.07 | 4.78 ± 0.83 | 0.53 | >0.60 |
| 4. Role of nurse after cardiac catheterization | 4.39 ± 0.67 | 4.33 ± 0.71 | 0.22 | >0.83 |
| 5. Role of nurse in prevention complication after cardiac catheterization | 3.93 ± 1.40 | 3.56 ± 0.88 | 1.01 | >0.32 |
| 6. Role of nurse in health education after cardiac catheterization | 4.59 ± 0.67 | 4.33 ± 1.00 | 0.72 | >0.49 |
| 7. Total knowledge | 36.76 ± 3.02 | 36.44 ± 1.42 | 0.47 | >0.65 |

This table shows that the highest mean score of knowledge was among the unmarried group of nurses under study .

**Table (10):** Relation between nurses knowledge and pervious training program in cardiac catheterization unit.

| N=50 / Item | Training | | | |
|---|---|---|---|---|
| | Yes | No | T-test | |
| | Mean ± SD | Mean ± SD | t | P-value |
| 1.Basic knowledge | 8.700 ± 0.979 | 6.267 ± 1.552 | 6.223 | <0.00* |
| 2.Role of nurse before cardiac catheterization | 11.350 ± 0.587 | 6.900 ± 2.695 | 7.246 | <0.00* |
| 3.Role of nurse during cardiac catheterization | 4.000 ± 1.124 | 2.900 ± 0.607 | 4.482 | <0.00* |
| 4.Role of nurse after cardiac catheterization | 4.400 ± 0.754 | 2.800 ± 1.157 | 5.452 | <0.00* |
| 5.Role of nurse in prevention complication after cardiac catheterization | 3.750 ± 1.293 | 2.367 ± 0.850 | 4.573 | <0.00* |
| 6.Role of nurse in health education after cardiac catheterization | 4.450 ± 0.826 | 2.633 ± 1.810 | 4.197 | <0.00* |

This table shows that high mean score (11.350± 0.587) in nurses knowledge before cardiac catheterization with training with very highly significant statistical difference (<0.00*) .

**Part V:** The relation between nurses practices in relation to their characteristics.

**Table (11):** Relation between nurses practices and their age group of nurses in cardiac catheterization unit.

| N=50 / Item | Age groups | | | | |
|---|---|---|---|---|---|
| | **<25 yrs** | **>25-30 yrs** | **>30** | **ANOVA** | |
| | **Mean ± SD** | **Mean ± SD** | **Mean ± SD** | **F** | **P-value** |
| 1.Practice role of nurses before cardiac catheterization | 15.33 ± 2.66 | 18.71 ± 2.98 | 14.00 ± 3.94 | 4.15 | <0.01* |
| 2.Practice role of nurses during cardiac catheterization | 11.00 ± 1.90 | 12.00 ± 2.08 | 9.80 ± 0.84 | 2.18 | >0.05 |
| 3.Practice role of nurses during cardiac catheterization | 12.67 ± 1.03 | 14.57 ± 2.15 | 13.00 ± 2.35 | 2.40 | >0.05 |

This table shows the relation between nurses practices and age group of nurses in cardiac catheterization unit. It shows the high mean score (18.71± 2.98) in practice role of nurses before cardiac catheterization was with age group 25-30yrs with highly significant statistical difference (<0.01*).

**Table (12):** Relation between nurse's practices and their qualification

| Item / N=50 | Diploma | Diploma+ Specialty | Bachelor | Bachelor+ post graduate | ANOVA | |
|---|---|---|---|---|---|---|
| | Mean ± SD | Mean ± SD | Mean ± SD | Mean ± SD | F | P-value |
| 1.Practice role of nurses before cardiac catheterization | 14.34 ± 2.99 | 15.33 ± 2.66 | 18.71 ± 2.98 | 14.00 ± 3.94 | 4.15 | <0.0*1 |
| 2.Practice role of nurses during cardiac catheterization | 10.22 ± 1.88 | 11.00 ± 1.90 | 12.00 ± 2.08 | 9.80 ± 0.84 | 2.18 | >0.05 |
| 3.Practice role of nurses after cardiac catheterization | 12.66 ± 1.64 | 12.67 ± 1.03 | 14.57 ± 2.15 | 13.00 ± 2.35 | 2.40 | >0.05 |

This table shows that there is high mean score (18.71 ± 2.98) in practice role of nurses before cardiac catheterization with bachelor degree with highly significant statistical difference (<0.01*).

**Table (13):** Relation between nurse's practice and their marital statues of nurses

| Practice role | Marital status | | | |
|---|---|---|---|---|
| | Unmarried | Married | T-test | |
| | Mean ± SD | Mean ± SD | t | P-value |
| 1.Practice role of nurses before cardiac catheterization | 15.56 ± 3.44 | 12.67 ± 1.12 | 4.43 | <0.00* |
| 2.Practice role of nurses during cardiac catheterization | 10.39 ± 1.64 | 11.11 ± 2.89 | -0.72 | >0.05 |
| 3.Practice role of nurses after cardiac catheterization | 13.20 ± 1.89 | 11.89 ± 0.78 | 3.32 | <0.00* |

This table shows that the high mean score (15.56±3.44) in practice role of nurses before cardiac catheterization was in unmarried nurses with very high significant statistical difference (<0.00***) in practice role of nurses before and after cardiac catheterization.

**Table (14):** Relation between nurse's practices and pervious training program.

| Practice role | Training program | | | |
|---|---|---|---|---|
| | Yes | No | T-test | |
| | Mean ± SD | Mean ± SD | t | P-value |
| 1.Practice role of nurses before cardiac catheterization | 15.56 ± 3.44 | 12.67 ± 1.12 | 4.43 | <0.01 |
| 2.Practice role of nurses during cardiac catheterization | 10.39 ± 1.64 | 11.11 ± 2.89 | -0.72 | >0.05 |
| 3.Practice role of nurses during cardiac catheterization | 13.20 ± 1.89 | 11.89 ± 0.78 | 3.32 | <0.01 |

This table shows that the high mean score (15.56±3.44) in Practice role of nurses before cardiac catheterization was in the nurses who received training program with very high significant statistical difference (<0.00***) in practice role of nurses before and after cardiac catheterization.

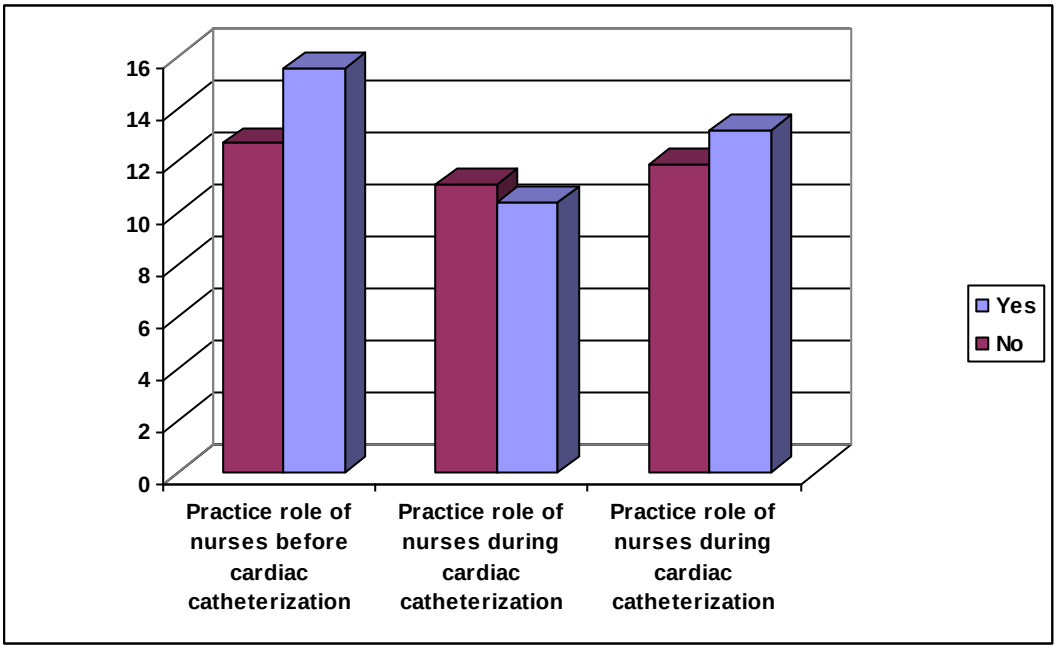


***Fig.(3):*** Relation between nurses practices and training program**.**

**Part IIV:** The Relation between total knowledge and total practice.

**Table (15):** Relation between total knowledge and total Practice for nurses in cardiac catheterization unit.

| Variable | Satisfactory | | Unsatisfactory | | Chi-squire $X^2$ | P-value |
|---|---|---|---|---|---|---|
| | N | % | N | % | | |
| Total knowledge | 22 | 44.00 | 28 | 56.00 | 11.831 | 0.00*** |
| Total Practices | 19 | 38.00 | 31 | 62.00 | | |

This table illustrated that relation between total knowledge and total practice for nurses in cardiac catheterization unite. It shows high percent (62.00) is unsatisfactory in practices with very high significant statistical difference P value (0.00***).