# Results

**The results of the study will be presented in the following sequence:**

**Part I:** Personal Characteristics of the Studied Subjects Table: 1

**Part II:** Nurses' Readiness Toward Using Computer in the Studied Setting Table (2-10).

**Part III:** Correlation Coefficient between Personal Characteristics and Total Score of Nurses' Readiness Toward Using Computer Table (11- 16).

**Table (1) Distribution of the Studied Nurses According to their Personal Characteristics (no= 152)**

| Personal characteristics | Benha University Hospital no= 86 | | Benha Teaching Hospital no= 66 | | Total no=152 | |
|---|---|---|---|---|---|---|
| | No | % | No | % | No | % |
| **Age ( years)** | | | | | | |
| < 30 | 60 | 69.8 | 34 | 51.5 | 94 | 61.9 |
| 30 - 40 | 23 | 26.7 | 22 | 33.3 | 45 | 29.7 |
| > 40 | 3 | 3.5 | 10 | 15.2 | 13 | 8.5 |
| **Mean ± SD** | 27.87 ± 5.92 | | 32.08 ± 7.29 | | | |
| **Experience years** | | | | | | |
| <10 | 56 | 65.1 | 28 | 42.4 | 84 | 55.3 |
| 10 - | 26 | 30.2 | 26 | 39.4 | 52 | 34.3 |
| > 20 - | 4 | 4.7 | 12 | 18.2 | 16 | 10.5 |
| **Mean ± SD** | 8.65 ± 6.04 | | 13.35 ± 7.15 | | | |
| **Experience years at current unit** | | | | | | |
| < 10 | 61 | 70.9 | 38 | 57.6 | 99 | 65.2 |
| 10 - | 24 | 27.9 | 20 | 30.3 | 44 | 28.9 |
| > 20- | 1 | 1.2 | 8 | 12.1 | 9 | 5.9 |
| **Mean ± SD** | 7.55 ± 5.61 | | 10.19 ± 6.55 | | | |
| **Qualification** | | | | | | |
| Baccalaureate degree in nursing | 34 | 39.6 | 11 | 16.6 | 45 | 29.6 |
| Associated degree of nursing | 10 | 11.6 | 4 | 6.1 | 14 | 9.3 |
| Nursing diploma | 42 | 48.8 | 51 | 77.3 | 93 | 61.2 |
| **Experience of computer in** | | | | | | |
| School | 32 | 37.3 | 15 | 22.7 | 47 | 30.9 |
| Training course | 13 | 15.1 | 5 | 7.6 | 18 | 11.9 |
| workshops | 2 | 2.3 | 2 | 3.0 | 4 | 2.7 |
| No experience at all | 39 | 45.3 | 44 | 66.7 | 83 | 54.7 |
| **Using of computer in nursing practice** | | | | | | |
| Yes | 11 | 12.8 | 13 | 19.7 | 24 | 15.8 |
| No | 75 | 87.2 | 53 | 80.3 | 128 | 84.3 |

**Table (1)** shows that the total study sample was 152 nurses, 86 of them working at Benha University Hospital and the other 66 nurses at Benha Teaching Hospital. As farther, more than two thirds of staff nurses (61.9%) were at age group of < 30 year, while in regarding to their years of experience; more than have of them (55.3%) were < 10 years of experience and in relation to their experience years at the current unit nearly two thirds of them (65.2%) were <10 years. In relation to nurse's qualification, about two thirds of staff nurses (61.2 %) has diploma in nursing, while more than half of them (54.7 %) had no previous experience with computer, also the majority of staff nurses in Benha university Hospital and Benha teaching Hospital (87.2% & 80.3%) respectively did not use computer in nursing practice before.

**Table (2) Percentage Distribution of the Staff Nurses Knowledge about Computer System by Study Settings (no = 152)**

| Hospitals / Knowledge Items (general knowledge about) | Benha University Hospital (no=86) | | | | | | Benha Teaching Hospital (no=66) | | | | | | $X^2$ | P value |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Yes | | To some extent | | No | | Yes | | To some extent | | No | | | |
| | No | % | No | % | No | % | No | % | No | % | No | % | | |
| 1-Computer system and its component. | 36 | 41.8 | 22 | 25.6 | 28 | 32.6 | 25 | 37.9 | 12 | 18.2 | 29 | 43.9 | 2.351 | > 0.05 |
| 2-The different types of operating systems, working with windows (e.g. windows XP) | 18 | 20.9 | 22 | 25.6 | 46 | 53.5 | 13 | 19.7 | 6 | 9.1 | 47 | 71.2 | 7.458 | < 0.05* |
| 3-Basic elements of communication and data transmission. | 16 | 18.6 | 22 | 25.6 | 48 | 55.8 | 6 | 9.1 | 15 | 22.7 | 45 | 68.2 | 3.394 | > 0.05 |
| 4-Internet and its search tools. | 12 | 14.0 | 9 | 10.5 | 65 | 75.5 | 6 | 9.1 | 9 | 9.1 | 54 | 81.8 | 1.003 | > 0.05 |

***A statistical significant difference (P≤ .05)**

****A highly statistical significant difference (P ≤ 0.001)**

**Table (2)** illustrated percentage distribution of the staff nurses knowledge about computer system by study settings. The results revealed that, there was a significance difference (P <0.05) in relation to their knowledge about the different types of operating systems, working with windows, and the most of studied nurses in Benha University Hospital and Benha Teaching Hospital (75.5%, 81.8 %) respectively shows having no knowledge about the internet and its search tools, while less than half of them (41.8%, 37.9%) respectively shows having knowledge about the computers in the studied hospitals. Also this table shows that the Benha University hospital staff nurses is more knowledgeable about computer system than the Benha Teaching Hospital staff nurses.

**Table (3) Percentage Distribution of the Staff Nurses Skills about Computer System in the Studied Settings (no = 152)**

| Hospitals / Computer skills | Benha University Hospital (no=86) | | | | | | Benha Teaching Hospital (no=66) | | | | | | $X^2$ | P value |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Yes | | To some extent | | No | | Yes | | To some extent | | No | | | |
| | No | % | No | % | No | % | No | % | No | % | No | % | | |
| 1-Can organize file into folders | 9 | 10.5 | 14 | 16.3 | 63 | 73.2 | 11 | 16.7 | 3 | 4.5 | 52 | 78.8 | 5.839 | < 0.05* |
| 2-Can insert page numbers. | 26 | 30.2 | 9 | 10.5 | 51 | 59.3 | 15 | 22.7 | 3 | 4.5 | 48 | 72.8 | 3.471 | > 0.05 |
| 3-Can use spelling and grammar tools. | 13 | 15.1 | 14 | 16.3 | 59 | 68.6 | 14 | 21.2 | 2 | 3.0 | 50 | 75.8 | 7.275 | < 0.05* |
| 4-Can use copy and paste options. | 22 | 25.6 | 11 | 12.8 | 53 | 61.6 | 11 | 16.7 | 4 | 6.1 | 51 | 77.2 | 4.417 | > 0.05 |
| 5-Can to send and resaved message by E-mail. | 11 | 12.8 | 9 | 10.5 | 66 | 76.7 | 2 | 3.0 | 6 | 9.1 | 58 | 87.9 | 4.798 | > 0.05 |
| 6-Can use the web to find references? | 16 | 18.6 | 4 | 4.7 | 66 | 76.7 | 9 | 13.6 | 4 | 6.1 | 53 | 80.3 | 0.762 | > 0.05 |

***A statistical significant difference (P ≤ 0.05)**

****A highly statistical significant difference (P ≤ 0.001)**

**Table (3)** Portrays percentage distribution of the staff nurses skills about computer system in the studied settings. The results revealed that, there is a significance difference (P <0.05) in relation to items of nurses can organize files into folders and can use spelling and grammar tools. And the most of studied nurses in Benha University Hospital and Benha Teaching Hospital (76.7% & 87.9 %) respectively shows cannot send or resave message by email, while (30.2% & 22.7%) of them respectively shows that they can insert page numbers in the studied hospitals.

## Table (4) Distribution of the Studied Sample Agreement Regarding to Their Concept about Computer System in the Studied Settings (no = 152)

| Hospital / Concept of computer | Benha University Hospital (no=86) | | | | | | Benha Teaching Hospital (no=66) | | | | | | $X^2$ | P value |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Agree | | Not sure | | Disagree | | Agree | | Not sure | | Disagree | | | |
| | No | % | No | % | No | % | No | % | No | % | No | % | | |
| 1-Computer is a powerful enabling tool. | 84 | 97.7 | 0 | 0.0 | 2 | 2.3 | 62 | 94.0 | 1 | 1.5 | 3 | 4.5 | 1.917 | > 0.05 |
| 2- Computer is enjoyable. | 75 | 87.2 | 9 | 10.5 | 2 | 2.3 | 60 | 90.9 | 2 | 3.0 | 4 | 6.1 | 5.602 | > 0.05 |
| 3- Feeling confident when dealing with computer. | 78 | 90.7 | 6 | 7.0 | 2 | 2.3 | 58 | 87.9 | 5 | 7.6 | 3 | 4.5 | 0.611 | > 0.05 |
| 4-Needing support and training to accept computer in the work. | 83 | 96.5 | 0 | 0.0 | 3 | 3.5 | 63 | 95.5 | 1 | 1.5 | 2 | 3.0 | 1.331 | > 0.05 |
| 5-It is difficult to deal with computer system. | 18 | 21.0 | 15 | 17.4 | 53 | 61.6 | 10 | 15.2 | 18 | 27.3 | 38 | 57.5 | 2.442 | > 0.05 |
| 6-Computers are frustrating to be used. | 6 | 7.0 | 8 | 9.3 | 72 | 83.7 | 4 | 6.1 | 8 | 12.1 | 54 | 81.8 | 0.346 | > 0.05 |
| 7-Computer will someday put health professionals out of job. | 5 | 5.8 | 8 | 9.3 | 73 | 84.9 | 3 | 4.5 | 7 | 10.6 | 56 | 84.9 | 0.178 | > 0.05 |
| 8-Working with computer is boring and tedious. | 2 | 2.3 | 8 | 9.3 | 76 | 88.4 | 3 | 4.5 | 10 | 15.2 | 53 | 80.3 | 1.925 | > 0.05 |
| 9- It is natural to use computer in health care setting. | 75 | 87.2 | 1 | 1.2 | 10 | 11.6 | 61 | 92.5 | 2 | 3.0 | 3 | 4.5 | 2.963 | > 0.05 |
| 10-Dealing well with technology and machines. | 70 | 81.4 | 10 | 11.6 | 6 | 7.0 | 56 | 84.9 | 6 | 9.0 | 4 | 6.1 | 0.330 | > 0.05 |
| 11- It is very important in nursing practice. | 82 | 95.3 | 0 | 0.0 | 4 | 4.7 | 66 | 100.0 | 0 | 0.0 | 0 | 0.0 | 3.153 | > 0.05 |
| 12- Computer in work is essential to be technically updated. | 83 | 96.5 | 1 | 1.2 | 2 | 2.3 | 60 | 90.9 | 2 | 3.0 | 4 | 6.1 | 2.104 | > 0.05 |
| 13- It help to improve nurse performance . | 85 | 98.8 | 0 | 0.0 | 1 | 1.2 | 65 | 98.5 | 1 | 1.5 | 0 | 0.0 | 0.036 | > 0.05 |
| 14- Computer at work is waste of time. | 5 | 5.8 | 14 | 16.3 | 67 | 77.9 | 7 | 10.6 | 6 | 9.0 | 53 | 80.4 | 2.580 | > 0.05 |
| 15- Computer will improve nurse's career. | 81 | 94.2 | 2 | 2.3 | 3 | 3.5 | 61 | 92.5 | 2 | 3.0 | 3 | 4.5 | 0.189 | > 0.05 |
| 16- It help to keep up to date nursing knowledge and research. | 83 | 96.5 | 2 | 2.3 | 1 | 1.2 | 59 | 89.4 | 2 | 3.0 | 5 | 7.6 | 3.097 | > 0.05 |
| 17-Computer keeps nurse away from her patients. | 5 | 5.8 | 14 | 16.3 | 67 | 77.9 | 2 | 3.0 | 10 | 15.2 | 54 | 81.8 | 0.730 | > 0.05 |
| 18-Using technology helps to communicate with colleagues in work. | 75 | 87.2 | 10 | 11.6 | 1 | 1.2 | 57 | 86.3 | 4 | 6.1 | 5 | 7.6 | 5.150 | > 0.05 |
| 19-Computer recording will lead to loss of patient privacy. | 7 | 8.1 | 12 | 14.0 | 67 | 77.9 | 6 | 9.1 | 13 | 19.7 | 47 | 71.2 | 1.012 | > 0.05 |

*** A statistical significant difference (P ≤ 0.05)**

****A highly statistical significant difference (P ≤ 0.001)**

**Table (4)** clearly shows the distribution of the studied sample agreement regarding to their concept about computer system in the studied settings. The result indicates that the majority of studied nurses in Benha University Hospital (98.8%) were agreed with the items of computers (help to improve nurse performance at work), while (88.4%) of them were disagree with the items of (working with computer is boring and tedious). While at Benha Teaching Hospital the all of the studied nurses (100.0%) were agreed with items of (computer is very important in nursing practice) , while the majority of them (84.9%) were disagreed with (computer will someday put health professionals out of job). There is no statistical significance difference related to all items between studied sample in the different settings.

**Table (5) Distribution of Nurses Agreement Regarding Benefits of Computer in the Studied Settings (no = 152)**

| Hospitals / Benefits of computer | Benha University Hospital ( no=86) | | | | | | Benha Teaching Hospital (no=66) | | | | | | $X^2$ | P value |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Agree | | Not sure | | Disagree | | Agree | | Not sure | | Disagree | | | |
| | No | % | No | % | No | % | No | % | No | % | No | % | | |
| 1-Using of information technology reduces error. | 76 | 88.4 | 4 | 4.6 | 6 | 7.0 | 37 | 56.0 | 25 | 37.9 | 4 | 6.1 | 26.901 | <0.001** |
| 2-Using of computer will made work easier. | 81 | 94.2 | 2 | 2.3 | 3 | 3.5 | 49 | 74.3 | 15 | 22.8 | 2 | 3.0 | 15.658 | <0.001** |
| 3-Computers will save nurses time for nursing tasks. | 70 | 81.4 | 13 | 15.1 | 3 | 3.5 | 50 | 75.8 | 1 | 1.5 | 15 | 22.7 | 1.877 | > 0.05 |
| 4- Computerized recording will be easier and faster than manual recording | 75 | 87.2 | 10 | 11.6 | 1 | 1.2 | 49 | 74.3 | 12 | 18.1 | 5 | 7.6 | 5.768 | <0.05* |
| 5-Using computer secure the patient information from being lost. | 73 | 84.9 | 7 | 8.1 | 6 | 7.0 | 55 | 83.4 | 3 | 4.5 | 8 | 12.1 | 1.817 | > 0.05 |
| 6-Using of computer helps in decision making regarding patient management. | 76 | 88.4 | 2 | 2.3 | 8 | 9.3 | 48 | 72.7 | 17 | 25.8 | 1 | 1.5 | 21.347 | <0.001** |

*A statistical significant difference (P ≤ 0.05)

** A highly statistical significant difference (P ≤ 0.001)

**Table (5)** reveals the distribution of nurses agreement regarding benefits of computer in the studied settings. The result shows that the most of studied nurses in Benha University Hospital (88.4%) were agreed with items of using of information technology reduces error, while (9.3%) of them were disagreed with using of computer helps in decision making regarding patient managment. While in Benha Teaching Hospital the majority of the studied nurses (83.4%) were agreed with items of using computer secure the patient information from being lost ,while (22.7%) of them were disagreed with computers will save nurses time for nursing tasks. There are a highly statistical significance difference ( P<0.001) in relation to item of using of information technology reduces error, Using of computer will made work easier and Using of computer helps in decision making regarding patient management. There is a significance difference (P<0.05) in relation to items of, computerized recording will be easier and faster than manual recording.

**Table (6) Distribution of Nurses Agreement Regarding Effect of Computer on Quality of Care in the Studied Settings (no = 152)**

| Hospitals / Effect of computer on quality of care | Benha University Hospital no=86 | | | | | | Benha Teaching Hospital no=66 | | | | | | $X^2$ | P value |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Agree | | Not sure | | Disagree | | Agree | | Not sure | | Disagree | | | |
| | No | % | No | % | No | % | No | % | No | % | No | % | | |
| 1- Computers will improve the quality of nursing care. | 77 | 89.5 | 4 | 4.7 | 5 | 5.8 | 43 | 65.2 | 20 | 30.3 | 3 | 4.5 | 18.489 | <0.001** |
| 2- Computer will decrease the cost of nursing care. | 38 | 44.2 | 16 | 18.6 | 32 | 37.2 | 25 | 37.9 | 27 | 40.9 | 14 | 21.2 | 10.083 | <0.001** |
| 3- Computer will improve documentation of the clinical records. | 83 | 96.5 | 3 | 3.5 | 0 | 0.0 | 45 | 68.2 | 20 | 30.3 | 1 | 1.5 | 22.606 | <0.001** |
| 4-Computerized charting decrease nurses workload. | 73 | 84.9 | 6 | 7.0 | 7 | 8.1 | 46 | 69.7 | 17 | 25.8 | 3 | 4.5 | 10.538 | <0.001** |

***A statistical significant difference (P ≤ 0.05)**

****A highly statistical significant difference (P ≤ 0.001)**

**Table (6)** illustrates distribution of nurses agreement regarding effect of computer on quality of care in the studied settings. The result reveals that there is a highly statistical significance difference (P<0.001) in relation to all items. And shows that the majority of the studied nurses in Benha University Hospital (96.5%) were agreed with computer will improve documentation of the clinical records, while about two thirds of the studied nurses in Benha Teaching Hospital (69.7%) were agreed with computerized charting decrease nurses workload. While (37.2% & 21.2%) of the studied nurses in Benha University Hospital and Benha Teaching Hospital respectively were disagreed with using of computer will decrease the cost of nursing care .

**Table (7) Distribution of Nurses Agreement Regarding Barriers of Applying Computer in the Studied Settings (no= 152)**

| Hospitals / Barriers of computer applying | Benha University Hospital no=86 | | | | | | Benha Teaching Hospital no=66 | | | | | | $X^2$ | P value |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Agree | | Not sure | | Disagree | | Agree | | Not sure | | Disagree | | | |
| | No | % | No | % | No | % | No | % | No | % | No | % | | |
| 1- No enough computers. | 63 | 73.3 | 7 | 8.1 | 16 | 18.6 | 24 | 36.3 | 31 | 47.0 | 11 | 16.7 | 31.480 | <0.001** |
| 2-Locations of computer. | 44 | 51.2 | 19 | 22.1 | 23 | 26.7 | 15 | 22.7 | 12 | 18.2 | 39 | 59.1 | 17.638 | <0.001** |
| 3-Work demands overload. | 43 | 50.0 | 17 | 19.8 | 26 | 30.2 | 20 | 30.3 | 24 | 36.4 | 22 | 33.3 | 7.422 | <0.05* |
| 4- Age of nurse. | 32 | 37.2 | 10 | 11.6 | 44 | 51.2 | 18 | 27.3 | 3 | 4.5 | 45 | 68.2 | 5.158 | >0.05 |
| 5- No interest in computer using. | 13 | 15.1 | 6 | 7.0 | 67 | 77.9 | 8 | 12.1 | 2 | 3.0 | 56 | 84.9 | 1.570 | >0.05 |

***A statistical significant difference (P ≤ 0.05)**

****A highly statistical significant difference (P ≤ 0.001)**

**Table (7)** displays the distribution of nurses agreement regarding barriers of applying computer in the studied settings. The result indicate that there is a highly statistical significance difference in relation to items of no enough computers, and locations of computer. And there is a statistical significance difference (P<0.05) in relation to work demands overload. Also the result shows that (73.3% & 36.3%) of the studied subject in Benha University Hospital and Benha Teaching Hospital respectively, were agreed with items of, no enough computers. While the majority of them (77.9% & 84.9%) respectively were disagreed with no interest in computer using.

**Table (8) Distribution of the Studied Sample Agreement Regarding Methods of Overcoming Barriers of Applying Computers in the Studied Settings (no= 152)**

| Hospitals / Methods of overcoming barriers of applying computer | Benha University Hospital no=86 | | | | | | Benha Teaching Hospital no=66 | | | | | | $X^2$ | P value |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Agree | | Not sure | | Disagree | | Agree | | Not sure | | Disagree | | | |
| | No | % | No | % | No | % | No | % | No | % | No | % | | |
| 1-Provideng flexible type of software. | 77 | 89.5 | 1 | 1.2 | 8 | 9.3 | 63 | 95.5 | 1 | 1.5 | 2 | 3.0 | 2.410 | >0.05 |
| 2-Providing enough time to use computer as a priority. | 71 | 82.5 | 1 | 1.2 | 14 | 16.3 | 59 | 89.4 | 3 | 4.5 | 4 | 6.1 | 5.120 | >0.05 |
| 3-Consedring use of computer as a part of work plan. | 84 | 97.7 | 0 | 0.0 | 2 | 2.3 | 65 | 98.5 | 1 | 1.5 | 0 | 0.0 | 2.840 | >0.05 |
| 4- Involving all nurses in computer training programs. | 80 | 93.0 | 2 | 2.3 | 4 | 4.7 | 61 | 92.5 | 3 | 4.5 | 2 | 3.0 | 0.809 | >0.05 |
| 5-Provieding computer programs according to nurse educational levels. | 83 | 96.5 | 1 | 1.2 | 2 | 2.3 | 66 | 100.0 | 0 | 0.0 | 0 | 0.0 | 2.349 | >0.05 |

***A statistical significant difference (P ≤ 0.05)**

****A highly statistical significant difference (P ≤ 0.001)**

**Table (8)** shows the distribution of the studied sample agreement regarding methods of overcoming barriers of applying computers in the studied settings. The result reveals that nearly all of studied subject (96.5% & 100.0%) in Benha University Hospital and Benha Teaching Hospital respectively were agreed with the items of providing computer programs according to nurse educational levels. While (16.3% & 6.1%) of them respectively were disagreed with providing enough time to use computer as a priority.

**Table (9) Mean Scores of Staff Nurses' Agreement Toward Using of Computer in the Studied Settings (no= 152)**

| Items | Maximum score | Benha University Hospital no=86 | Benha Teaching Hospital no=66 | t | P value |
|---|---|---|---|---|---|
| | | Mean ± SD | Mean ± SD | | |
| Knowledge about computer system | 12 | 6.78± 2.44 | 6.11 ± 2.35 | 1.711 | >0.05 |
| Computer skills | 18 | 8.96 ± 3.48 | 8.21 ± 3.17 | 1.375 | >0.05 |
| Concept of computer | 57 | 43.76 ± 2.47 | 43.85 ± 2.44 | 0.230 | >0.05 |
| Benefits of computer | 18 | 17.00 ± 1.59 | 16.06 ± 2.55 | 2.784 | <0.001** |
| Effect of computer on quality of care | 12 | 10.66 ± 1.37 | 10.09 ± 1.65 | 2.333 | <0.05* |
| Barriers of computer applying | 15 | 10.22 ± 2.49 | 8.67 ± 2.46 | 3.832 | <0.001** |
| Methods of overcoming barriers of applying computer | 15 | 14.34 ± 1.27 | 14.77 ±0.60 | 2.499 | <0.05* |
| Total | 147 | 111.73 ± 6.61 | 107.76 ±6.60 | 3.675 | <0.001** |

***A statistical significant difference (P ≤ 0.05)**

****A highly statistical significant difference (P ≤ 0.001)**

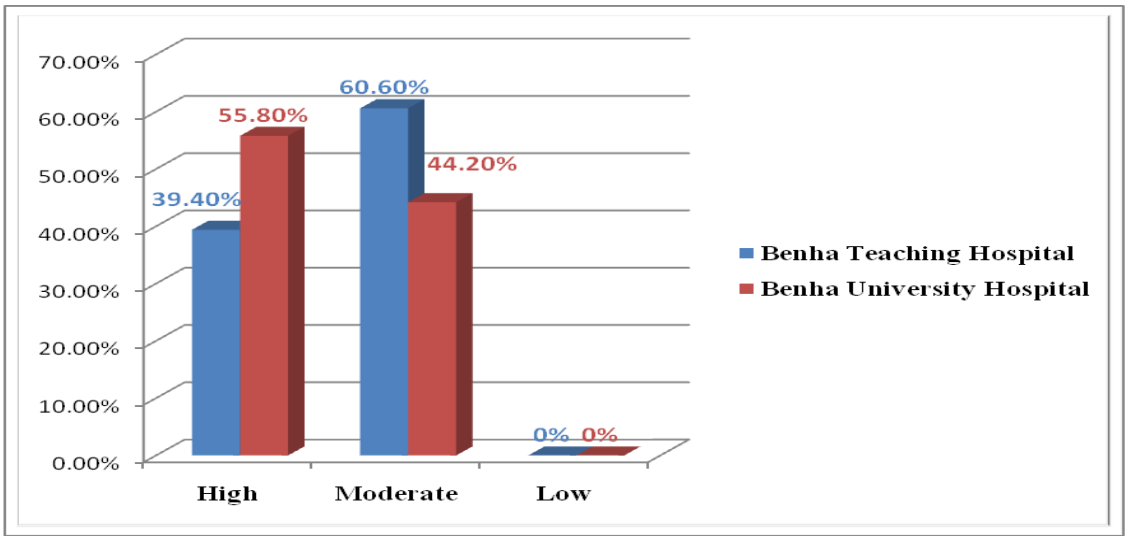
**Table (9)** Present mean scores of staff nurses' agreement toward using computer system in the studied settings. The result shows that there is a highly statistical significant difference ($P \leq 0.001$) between the studied sample in relation to benefits of computer and barriers of computer applying. There is a statistical significant difference ($P \leq 0.05$) in relation to effect of computer on quality of care and methods of overcoming barriers of applying computer . Also the result indicates that nurses are ready to use computer system in their work settings.

**Table (10) Level of Nurses Readiness Regarding Using Computer in the Studied Settings (no= 152)**

| Hospitals / Level of readiness | Benha University Hospital no=86 | | Benha Teaching Hospital no=66 | | $X^2$ | P value |
|---|---|---|---|---|---|---|
| | No | % | No | % | | |
| High | 48 | 55.8 | 26 | 39.4 | 4.030 | <0.05* |
| Moderate | 38 | 44.2 | 40 | 60.6 | | |
| Low | 0 | 0.0 | 0 | 0.0 | | |

*A statistical significant difference (P ≤ 0.05)

**A highly statistical significant difference (P ≤ 0.001)




$X^2$ 4.030 P <0.05

**Figure (1)** Level of nurses' readiness regarding using computer in the studied settings

**Table (10)** illustrate level of nurses' readiness regarding using computer in the studied hospitals. The result reveals that more than half of the studied nurses in Benha University Hospital (55.8%) show high level of readiness. While about two thirds of the studied nurses in Benha Teaching Hospital (60.6%) show moderate level readiness. Also result shows that there is a statistical significant difference (P<0.05) between studied sample.

**Table (11 ) Correlation Coefficient between Total Score of Studied Nurses' Readiness toward Using of Computer in the Studied Hospitals by Age (no=152).**

| Variable | Benha university hospital no=86 | | Benha teaching hospital no=66 | |
|---|---|---|---|---|
| | Age | | Age | |
| | r | p | r | p |
| Knowledge about computer system | -0.306 | <0.001** | -0.133 | >0.05 |
| Computer skills | -0.297 | <0.001** | -0.261 | >0.05 |
| Concept of computer | -0.018 | >0.05 | -0.023 | >0.05 |
| Benefits of computer | -0.096 | >0.05 | 0.006 | >0.05 |
| Effect of computer on quality of care | -0.079 | >0.05 | 0.157 | >0.05 |
| Barriers of computer applying | -0.220 | <0.05* | 0.171 | >0.05 |
| Methods of overcoming barriers of applying computer | -0.048 | >0.05 | 0.068 | >0.05 |
| Total | -0.260 | <0.05* | -0.004 | >0.05 |

***A statistical significant difference (P ≤ 0.05)**
****A highly statistical significant difference (P ≤ 0.001)**

**Table (11)** shows the correlation coefficient between total score of studied nurses' readiness toward using of computer in the studied hospitals by age. It is clear from the table that, in Benha University Hospital there is a highly statistical significance correlation ($P \leq 0.001$) between the nurses age and their knowledge about computer system and computer skills. There is a statistical significant correlation between the nurses age and the barriers of computer applying in the studied hospitals. While in Benha Teaching Hospital there was no significance correlation between nurses readiness and their age.

**Table (12) Correlation Coefficient Between Total Score of Studied Nurses' Readiness Toward Using of Computer in the Studied Hospitals by Their Years of Experience (no= 152)**

| Variable | Benha university hospital no=86 | | Benha teaching hospital no=66 | |
|---|---|---|---|---|
| | Experience years | | Experience years | |
| | r | p | r | p |
| Knowledge about computer system | -0.447 | <0.001** | -0.256 | <0.05* |
| Computer skills | -0.344 | <0.001** | -0.314 | <0.05* |
| Concept of computer | 0.081 | >0.05 | -0.034 | >0.05 |
| Benefits of computer | -0.172 | >0.05 | 0.045 | >0.05 |
| Effect of computer on quality of care | -0.117 | >0.05 | 0.178 | >0.05 |
| Barriers of computer applying | -0.337 | <0.001** | 0.128 | >0.05 |
| Methods of overcoming barriers of applying computer | -0.092 | >0.05 | 0.011 | >0.05 |
| Total | -0.393 | <0.001** | -0.049 | >0.05 |

***A statistical significant difference (P ≤ 0.05)**

****A highly statistical significant difference (P ≤ 0.001)**

**Table (12)** portray the correlation coefficient between total score of studied nurses' readiness toward using of computer in the studied hospitals by Their years of experience. In Benha University Hospital there is a highly positive statistical significance correlation ($P \leq 0.001$) between the nurses knowledge about computer, computer skills and barriers of computer applying and their experience years. While in Benha Teaching Hospital there is a positive statistical significant correlation ($P \leq 0.05$) between the nurses knowledge about computer, computer skills and their experience years.

**Table (13) Correlation Coefficient Between Total Score of Studied Nurses' Readiness Toward Using of Computer in the Studied Hospitals by Their Work Years at the Current Unit (no=152)**

| Variable | Benha university hospital no=86 | | Benha teaching hospital no=66 | |
|---|---|---|---|---|
| | Work years at the current unit | | Work years at the current unit | |
| | r | p | r | p |
| Knowledge about computer system | -0.438 | <0.001** | 0.271 | <0.05* |
| Computer skills | -0.277 | <0.001** | -0.345 | <0.001** |
| Concept of Computer | -0.249 | <0.05* | -0.090 | >0.05 |
| Benefits of computer | -0.226 | <0.05* | 0.001 | >0.05 |
| Effect of computer on quality of care | -0.178 | >0.05 | 0.060 | >0.05 |
| Barriers of computer applying | -0.345 | <0.001** | 0.195 | >0.05 |
| Methods of overcoming barriers of applying computer | -0.159 | >0.05 | -0.008 | >0.05 |
| Total | -0.393 | <0.001** | -0.101 | >0.05 |

***A statistical significant difference (P ≤ 0.05)**

****A highly statistical significant difference (P ≤ 0.001)**

**Table (13)** Shows correlation coefficient between total score of studied nurses' readiness toward using of computer in the studied hospitals by their work years at the current unit. The result reveals that in Benha University Hospital there is a highly positive statistical significance correlation ($P \leq 0.001$) between nurses' readiness toward using computer and their work years at the current units. While in Benha Teaching Hospital there is a highly positive statistical significance correlation ($P \leq 0.001$) between nurses' computer skills and their work years at the current unit. Also there is a positive statistical significance correlation between studied sample ($P \leq 0.05$) regarding to their knowledge about computer.

**Table (14 ) Correlation of the Total Score of Nurses' Readiness Toward Using Computer in the Studied Hospitals by their Qualifications(no=152)**

| Items | Max. score | Benha university hospital no=86 | | | Benha teaching hospital no=66 | | | F | p |
|---|---|---|---|---|---|---|---|---|---|
| | | Bachelor no=34 | Associated degree of nursing no=10 | Diploma no=42 | Bachelor no=11 | Associated degree of nursing no=1 | Diploma no=54 | | |
| | | Mean ± SD | Mean ± SD | Mean ± SD | Mean ± SD | Mean ± SD | Mean ± SD | | |
| Knowledge about computer system | 12 | 8.29±2.04 | 8.10±2.51 | 5.24±1.69 | 9.09±1.92 | 4.00±0.00 | 5.54±1.96 | F1=26.003<br>F2=15.718 | p1<0.001**<br>p2<0.001** |
| Computer skills | 18 | 10.12±3.91 | 10.20±4.21 | 7.74±2.42 | 11.00±2.93 | 6.00±0.00 | 7.69±2.95 | F1=5.681<br>F2= 6.061 | p1<0.001**<br>p2<0.001** |
| Concept of computer | 95 | 66.24±4.08 | 65.20±3.22 | 64.83±4.26 | 66.64±4.69 | 62.00±0.00 | 65.79±4.20 | F1= 1.122<br>F2=0.591 | p1 >0.05<br>p2>0.05 |
| Benefits of computer | 30 | 25.18±3.35 | 24.59±4.04 | 24.00±4.49 | 22.00±2.45 | 16.00±0.00 | 25.11±3.97 | F1= 0.435<br>F2=5.678 | p1>0.05<br>p2<0.001** |
| Effect of computer on quality of care | 20 | 15.38±2.32 | 14.20±1.62 | 15.88±2.25 | 14.55±1.97 | 12.00±0.00 | 15.41±2.74 | F1=2.374<br>F2= 1.248 | p1>0.05<br>p2>0.05 |
| Barriers of computer applying | 25 | 15.24±3.56 | 14.70±3.13 | 13.83±3.48 | 13.36±2.42 | 13.00±0.00 | 13.96±3.81 | F1=1.550<br>F2= 0.153 | p1>0.05<br>p2>0.05 |
| Methods of overcoming barriers of applying computer | 25 | 22.38±2.42 | 21.19±3.25 | 22.20±2.44 | 21.91±2.02 | 20.00±0.00 | 21.70±2.21 | F1=1.751<br>F2= 0.353 | p1>0.05<br>p2>0.05 |
| Total | 225 | 162.82±13.07 | 158.60±11.79 | 153.31±11.15 | 158.55±55 | 133.00±0.00 | 155.20±12.57 | F1=5.926<br>F2= 1.993 | p1<0.001**<br>p2>0.05 |

***A statistical significant difference (P ≤ 0.05)**

****A highly statistical significant difference (P ≤ 0.001)**

**F1, P1 refer to Benha university hospital**

**F2, P2 refer to Benha teaching hospital**

**Table (14)** Shows correlation of the total score of nurses' readiness toward using computer in the studied hospitals by their qualifications. The results point to highly statistical significant differences($P \leq 0.001$) between Benha University Hospital and Benha Teaching Hospital in the items of knowledge about computer, computer skills and benefits of computer. However, there was a highly statistical significant positive correlation ($P \leq 0.001$) between nurses' readiness toward using computer and their qualifications in Benha university hospital.

**Table (15) Correlation of the Total Score of Nurses Readiness Toward Using Computer in the Studied Settings by their Experience of Using Computer (no=152)**

| Items | Max. score | Benha university hospital no=86 | | | | Benha teaching hospital no=66 | | | | F | p |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | School no=32 | Training course no=13 | Workshop no=2 | No experience at all no=39 | School no=15 | Training course no=5 | Workshop no=2 | No experience at all no=44 | | |
| | | Mean ± SD | Mean ± SD | Mean ± SD | Mean ± SD | Mean ± SD | Mean ± SD | Mean ± SD | Mean ± SD | | |
| Knowledge about computer system | 12 | 7.22±2.35 | 7.38.±1.66 | 8.50±0.71 | 6.13±2.66 | 6.33±2.72 | 7.00±2.45 | 6.00±2.83 | 5.93±2.26 | F1= 1.928<br>F2=0.358 | p1 >0.05<br>p2 >0.05 |
| Computer skills | 18 | 9.25±3.73 | 9.46±3.23 | 9.50±0.71 | 8.54±3.46 | 9.00±3.29 | 9.20±3.63 | 7.00±1.41 | 7.89±3.14 | F1= 0.363<br>F2=0.714 | p1 >0.05<br>p2 >0.05 |
| Concept of computer | 57 | 43.84±2.19 | 43.77±1.48 | 42.00±1.41 | 43.77±2.97 | 44.00±1.89 | 44.00±1.73 | 37.00±8.49 | 44.09±1.91 | F1= 0.343<br>F2=6.863 | p1 >0.05<br>p2<0.001** |
| Benefits of computer | 18 | 17.34±1.04 | 17.46±1.05 | 14.00±0.00 | 16.72±1.93 | 15.80±3.53 | 15.00±1.58 | 17.00±1.41 | 16.23±2.29 | F1= 4.013<br>F2=0.483 | p1<0.05*<br>p2>0.05 |
| Effect of computer on quality of care | 12 | 10.72±1.22 | 10.46±1.51 | 10.00±0.00 | 10.72±1.48 | 10.07±2.22 | 9.20±1.79 | 10.00±1.41 | 10.20±1.44 | F1=0. 282<br>F2=0.545 | p1 >0.05<br>p2>0.05 |
| Barriers of computer applying | 15 | 10.09±2.40 | 10.31±1.75 | 9.00±0.00 | 10.36±2.85 | 9.00±2.36 | 7.20±084 | 10.00±5.66 | 8.66±2.48 | F1= 0.226<br>F2=0.877 | p1>0.05<br>p2>0.05 |
| Methods of overcoming barriers of applying computer | 15 | 14.44±1.05 | 14.62±0.77 | 15.00±0.00 | 14.15±1.57 | 14.80±0.56 | 14.60±0.89 | 14.00±1.41 | 14.82±0.54 | F1= 0.715<br>F2=1.349 | p1<0.05*<br>p2>0.05 |
| Total | 147 | 112.90±6.78 | 113.46±6.19 | 108.38±6.58 | 110.38±6.58 | 109.00±6.69 | 106.20±6.76 | 101.00±2.83 | 107.82±6.62 | F1= 1.403<br>F2=0.968 | p1>0.05<br>p2>0.05 |

***A statistical significant difference (P ≤ 0.05)**
****A highly statistical significant difference (P ≤ 0.001)**
**F1, P1 refer to Benha university hospital**

**F2, P2 refer to Benha teaching hospital**

**Table (15)** illustrates correlation of the total score of nurses readiness toward using computer in the studied settings by their experience of using computer. The result shows that there is a highly statistical significant difference (P ≤ 0.001) between the nurses readiness toward using computer and concept of computer in Benha Teaching Hospital, while there was a statistical significant difference (P ≤ 0.05) in relation to benefits of computer in Benha University Hospital. Also there was a negative correlation between nurses readiness toward using computer and their experience of using computer.

## Table (16) Correlation of the Total Score of Nurses' Readiness Toward Using Computer in the Studied Hospitals by Their Work Units (no=152)

| Items | Max. score | Benha university hospital no=86 (1) | | | | Benha teaching hospital no=66 (2) | | | F | p |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Intensive care unit no=22 | Coronary care unit no=21 | Premature unit no=24 | Hemodialysis no=19 | Intensive care unit no=24 | Premature unit no=12 | Hemodialysis no=30 | | |
| | | Mean ± SD | Mean ± SD | Mean ± SD | Mean ± SD | Mean ± SD | Mean ± SD | Mean ± SD | | |
| Knowledge about computer system | 12 | 7.00±2.27 | 7.38±2.44 | 7.38±2.48 | 5.11±1.945 | 7.46±2.67 | 5.83±2.41 | 5.13±1.43 | F1=4.412<br>F2= 8.028 | p1<0.001**<br>p2<0.001** |
| Computer skills | 18 | 8.41±3.07 | 10.09±4.15 | 9.67±3.53 | 7.47±2.48 | 9.71±3.62 | 8.17±2.76 | 7.03±2.44 | F1=2.552<br>F2= 5.392 | p1 >0.05<br>p2<0.001** |
| Concept of computer | 57 | 43.91±2.69 | 43.00±2.85 | 44.08±1.82 | 44.00±2.49 | 44.00±2.15 | 44.17±1.69 | 43.60±2.92 | F1= 0.884<br>F2=0.296 | p1 >0.05<br>p2>0.05 |
| Benefits of computer | 18 | 16.63±1.43 | 17.38±1.12 | 17.75±0.61 | 16.05±2.39 | 16.08±2.92 | 16.08±2.23 | 16.03±2.43 | F1= 5.560<br>F2=0.003 | p1<0.001**<br>p2>0.05 |
| Effect of computer on quality of care | 12 | 10.18±1.44 | 10.95±1.07 | 10.63±1.35 | 10.95±1.54 | 9.83±1.86 | 10.33±1.67 | 10.20±1.49 | F1= 1.527<br>F2=0.478 | p1 >0.05<br>p2>0.05 |
| Barriers of computer applying | 15 | 10.91±2.84 | 10.57±2.50 | 9.46±2.45 | 10.00±2.49 | 8.42±2.45 | 8.33±2.71 | 9.00±2.41 | F1= 1.521<br>F2=0.503 | p1>0.05<br>p2>0.05 |
| Methods of overcoming barriers of applying computer | 15 | 14.14±1.32 | 14.81±0.61 | 14.67±0.76 | 13.68±1.89 | 14.75±0.61 | 14.67±078 | 14.83±0.53 | F1= 3.667<br>F2=0.348 | p1<0.05*<br>p2>0.05 |
| Total | 147 | 95.77±4.59 | 96.71±4.05 | 96.58±3.01 | 94.68±5.80 | 93.08±6.96 | 93.58±4.21 | 93.67±5.36 | F1= 0.912<br>F2=0.071 | p1>0.05<br>p2>0.05 |

***A statistical significant difference (P ≤ 0.05)**

****A highly statistical significant difference (P ≤ 0.001)**

**F1, P1 refer to Benha university hospital**

**F2, P2 refer to Benha teaching hospital**

**Table (16)** Shows correlation of the total score of nurses' readiness toward using computer in the studied hospitals by their work units. The result reveals that there was a negative statistical significance correlation between nurses readiness toward using computer and their work units. However, there was a highly statistical significant differences($P \leq 0.001$) between Benha University Hospital and Benha Teaching Hospital in the items of knowledge about computer, computer skills and benefits of computer. There is a statistical significant difference ($P \leq 0.05$) in the item of methods of overcoming barriers of applying computers.