



Results

Data of the study was grouped and analyzed according to the following headings:

Part I: Comparisons between control and study groups regard their knowledge at different study phases table (1-3).

Part II: Comparisons between control and study groups regard their skills at different study phases table (4-6).

Part III: Nursing- interns attitude toward CBT at different study phases table (7-14).

Part IV: Preference for CBT or TCT as reported by the study group table (15).



Table (1): Comparisons between mean scores of control and study groups regard their administration knowledge at different study phases

Study phases \ Group	Max. score	Control group		Study group		t	(p) Value
		Mean	SD	Mean	SD		
Pre	100	41.92	9.39	40.50	9.03	0.762	> 0.05
Immediate	100	84.20	7.41	87.06	6.41	2.039	≤ 0.05*
Follow-up	100	81.74	8.67	85.97	5.15	2.927	≤ 0.05*

* A statistical significant difference ($P \leq 0.05$)

Table (1) shows comparisons between mean scores of control and study groups regarding their knowledge at different study phases. It can be observed from this table that there was general improvement in administration knowledge for both control and study groups as compared to the pre- phase. However, a slight mean decline occurred during follow-up phase relative to the immediate phase. The difference observed between the two groups was statistically significant ($p \leq 0.05$). The study group had higher mean scores (87.06 and 85.97) than the control group (84.20 and 81.74) regarding their immediate and follow-up administration knowledge, respectively. While there was no statistically significant difference between two groups regarding their pre administration knowledge.



Table (2): Difference among pre, immediate and follow-up administration knowledge scores for the control and the study groups

Pre, immediate and follow-up knowledge Group	Variance source	Sum of Squares	df	Mean Square	F	(p) Value
Control group	Between Groups	۵۶۳۲۱.۳۷	۲	۲۸۱۶۰.۶۸	۳۸۶.۶۸	≤ 0.001**
	Within Groups	۱۰۷۰۵.۳۰	۱۴۷	۷۲.۸۲		
	Total	۶۷۰۲۶.۶۷	۱۴۹			
Study group	Between Groups	67801.51	2	33900.75	680.93	≤ 0.001**
	Within Groups	7019.79	141	49.78		
	Total	74821.30	143			

**A highly statistical significant difference ($P \leq 0.001$)

Table (2) shows differences among pre, immediate and follow-up knowledge scores for the control and the study groups. The results in this table revealed that there was a highly significant difference ($P \leq 0.001$) between the pre, immediate and follow-up administration knowledge scores for both control and study groups.



Table (۳): Multiple comparisons of mean difference among pre, immediate and follow-up administration knowledge scores for the control and the study groups

Group	Control group			Study group		
	Pre Mean= 41.92	Immediate Mean= 84.20	Follow-up Mean= 81.74	Pre Mean= 40.50	Immediate Mean= 87.06	Follow-up Mean= 85.97
Pre	-	42.28**	-	-	46.56**	-
Immediate	-	-	2.46	-	-	1.08
Follow-up	39.82**	-	-	45.47**	-	-

** A highly statistical significant difference ($P \leq 0.001$)

The multiple comparisons of the mean difference between pre, immediate and follow-up administration knowledge scores for the control and the study groups are shown in table (3). These results indicated that there was a highly significant difference ($P \leq 0.001$) between pre and immediate administration knowledge scores for the control and the study groups (42.28 and 46.56) respectively. Additionally, there was a highly significant difference ($P \leq 0.001$) between the pre and follow-up administration knowledge scores for the control (39.82) and the study group (45.47).



Table (4): Comparisons between mean scores of control and study groups regard their administration skills at different study phases

Group Study phases	Max. score	Control group		Study group		t	(p) Value
		Mean	SD	Mean	SD		
Pre	387	204.92	14.57	205.08	22.28	0.027	> 0.005
Immediate	387	354.70	8.059	366.08	6.526	7.66	≤ 0.001**
Follow-up	387	337.76	8.698	350.79	8.63	7.44	≤ 0.001**

* A statistical significant difference ($P \leq 0.05$) **A highly statistical significant difference ($P \leq 0.001$)

Table (4) illustrates the comparison between mean scores of control and study groups regarding their administration skills at different study phases. The results revealed that there was a general improvement in administration skills for both control and study groups as compared to pre phase. However, there was a highly significant ($p \leq 0.001$). Mean scores decline observed in the follow-up phase in relation to the immediate phase. On the other hand, the study group had high mean scores in relation to immediate and follow-up administration skills (366.08 and 350.79) than the control group (354.70 and 337.76), respectively. While there wasn't a significant statistical difference between the control and the study group regarding pre administration skills.



Table (5): Differences among pre, immediate and follow-up administration skills scores for the control and the study groups

Pre, immediate and follow-up skills score Group	Variance source	Sum of Squares	df	Mean Square	F	(p) Value
Control group	Between Groups	772227.17	2	386113.08	2800.89	$\leq 0.001^{**}$
	Within Groups	17300.70	147	117.69		
	Total	789527.87	149			
Study group	Between Groups	758172.05	2	379086.02	1852.51	$\leq 0.001^{**}$
	Within Groups	28853.25	141	204.63		
	Total	787025.30	143			

** A highly statistical significant difference ($P \leq 0.001$)

Table (5) shows differences among pre, immediate and follow-up administration skills scores for the control and the study groups. The result indicated that there was a highly significant difference ($p \leq 0.001$) among pre, immediate and follow-up administration skills scores for both control and study groups.



Table (٦): Multiple comparisons of the mean difference in the pre, immediate and follow-up administration skills for the control and the study groups

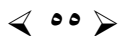
Group	Control group			Study group		
	Pre Mean= 204.92	Immediate Mean= 354.70	Follow-up Mean= 337.76	Pre Mean= 205.08	Immediate Mean= 366.08	Follow-up Mean= 350.79
Pre	-	١٤٩.٧٢**	-	-	161.00**	
Immediate	-	-	١٦.٩٤**	-	-	15.29**
Follow-up	١٣٢.٧٨**	-	-	145.70**	-	-

** A highly statistical significant difference ($P \leq 0.001$)

Table (٦) shows multiple comparisons of the mean differences among pre, immediate and follow-up administration skills for the control and the study groups. It can be observed from table 6 that there was a highly significant difference ($P \leq 0.001$) between pre and immediate scores for control and study groups (١٤٩.٧٢ and 161.00), respectively and there was a highly significant difference ($P \leq 0.001$) between pre and follow-up administration skills scores for control and study groups (١٣٢.٧٨ and 145.70), respectively and there was a highly significant difference ($P \leq 0.001$) between the immediate and follow-up scores for control and study groups (١٦.٩٤ and 15.29), respectively.



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Table (12): Mean scores of the study group's attitude toward CBT at different study phases

Study phases Attitude dimension	Max. score	Pre			Immediate			Follow-up		
		%	Mean	SD	%	Mean	SD	%	Mean	SD
Confidence	20	74.4	14.89	2.41	87.6	17.52	1.55	85.7	17.14	1.70
Usefulness	20	65.0	13.00	2.40	70.6	14.12	1.42	71.0	14.20	1.41
Learning motivation	30	68.7	20.62	3.12	81.3	24.41	2.28	75.5	22.66	2.63
Format	25	72.4	18.10	2.86	84.5	21.14	2.06	83.8	20.95	2.14
Presentation	45	72.2	32.52	4.37	78.0	35.14	3.09	76.7	34.52	3.10
Total	140	70.9	99.29	11.05	80.1	112.25	7.47	78.2	109.50	8.14

It can be observed from table (12) that study group reported a positive attitude toward CBT at pre, immediate and follow-up study. However; highest percentages (74.4% and 72.4%; 87.6% and 84.5%; and 85.7% and 83.8%) related to confidence and format at pre, immediate and follow-up study, respectively.



Table (13): Differences between the pre, immediate and follow-up CBT attitude for the study group

Pre, immediate and Follow-up Dimension	Variance source	Sum of Squares	df	Mean Square	F	(p) Value
confidence	Between Groups	193.50	2	96.75	26.01	≤ 0.001
	Within Groups	524.43	141	3.71		
	Total	717.93	143			
usefulness	Between Groups	43.72	2	21.86	6.68	≤ 0.001
	Within Groups	461.16	141	3.27		
	Total	504.88	143			
learning motivation	Between Groups	174.05	2	87.02	11.88	≤ 0.001
	Within Groups	1032.58	141	7.32		
	Total	1206.63	143			
format	Between Groups	278.93	2	139.46	26.92	≤ 0.001
	Within Groups	730.37	141	5.18		
	Total	1009.30	143			
presentation	Between Groups	180.50	2	90.25	7.06	≤ 0.001
	Within Groups	1801.93	141	12.78		
	Total	1982.43	143			
Total		3941.09	2	1970.54	24.05	≤ 0.001
		11552.39	141	81.93		
		15493.49	143			

** A highly statistical significant difference ($P \leq 0.001$)

Table (13) shows the differences between the pre, immediate and follow-up CBT attitude for the study group. The result indicated that there was a highly significant difference ($P \leq 0.001$) of all CBT attitude dimensions through different study phases.



Table (١٤): Multiple comparisons of mean difference between the pre, immediate and follow-up CBT attitude for the study group

Study phases	Pre Mean = 99.29	Immediate Mean=112.25	Follow-up Mean = 109.50
Pre	-	11.81**	-
Immediate	-	-	1.60
Follow-up	10.20**	-	-

** A highly statistical significant difference ($P \leq 0.001$)

Table (١٤) shows multiple comparisons of the mean difference between the pre, immediate and follow-up CBT attitude for the study group. The results revealed a highly significant difference ($P \leq 0.001$) between the pre and immediate attitudes (11.81). On the other hand, there was a highly significant difference ($P \leq 0.001$) between pre and follow-up attitudes (10.20).



Table (15): Frequency distribution of the study group’s preference for CBT or TCT

Items	Study group N=48					
	agree		Neutral		disagree	
	N	%	N	%	N	%
CBT is more effective than TCT.	47	97.9	-	-	1	2.1
CBT helps to remember the material more than TCT.	46	95.8	2	4.2	-	-
CBT allows using time more TCT.	48	100	-	-	-	-
CBT provides more consistent presentations than TCT.	42	87.4	3	6.3	3	6.3
CBT is more convenient than TCT.	44	91.6	2	4.2	2	4.2
CBT presentations help to pay attention more than TCT.	41	85.4	2	4.2	5	10.4
TCT is isolated than CBT.	26	54.1	14	29.2	8	16.7
TCT is less enjoyable than CBT.	43	89.6	-	-	5	10.4
TCT is less interesting than CBT.	45	93.7	-	-	3	6.3
Prefer to learn from a computer than read a textbook.	45	93.7	1	2.1	2	4.2
Preference of CBT over TCT.	47	97.9	-	-	1	2.1

Table (15) shows the frequency distribution of study group’s preference for CBT or TCT. From this table, it was clear that 100% of the study group members indicated that CBT allowed using time more efficiently than TCT. 97.9% agreed that CBT was more effective in learning than TCT. Interestingly, 97.9% of the study group preferred CBT over TCT.