Table (1): Distribution of the studied group according to some sociodemographic characteristics.

Distribution / Sociodemographics		No. (250)	Percent % 100.0
Age	<40	146	58.4
	≥40	104	41.6
Residence	Urban	177	70.8
	Rural	73	29.2
Educational level	Illiterate and read & write	4	1.6
	School	59	23.6
	University	187	74.8
Marital status	Single	21	8.4
	Married	229	91.6
Feeding of the children	Natural	150	65.8
	Artificial	16	7.0
	Mixed	62	28
Social class	Low	6	2.4
	Middle	35	14
	High	209	83.6

Table (1) clarifies that (58.4%) of females were at the age-group <40years, (70.8%) were urban dwellers, (74.8%)were with high level of education ,(91.6%) were married, (65.8%)breast fed their children,and (83.6%)of high social class.

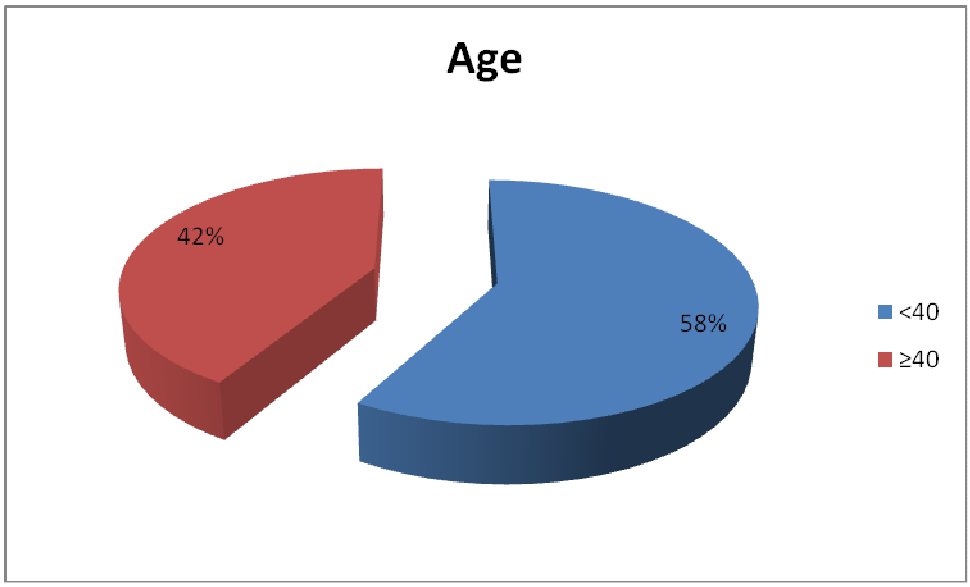

Fig . (1): Age distribution of the studied group

Table (2) Distribution of the studied group according to family history of breast cancer.

Distribution / Family history of breast cancer	No. (250)	Percent % 100.0
Negative	225	90.00
Positive	25	10.00

Table (2) reveals that (10.00%) of the studied group have family history of breast cancer.

Table (3) Distribution of breast cancer risk factors as identified by the studied group.

Variable \ Distribution		No. (250)	Percent % 100.0
Old age	Yes	173	69.2
	No	26	10.4
	Don't know	51	20.4
Family history of breast cancer	Yes	203	81.2
	No	15	6.0
	Don't know	32	12.8
Late marriage and 1st Child birth >30	Yes	122	48.8
	No	46	18.4
	Don't know	82	32.8
Lack of Breast feeding	Yes	194	77.6
	No	21	8.4
	Don't know	35	14.0
Delayed menopause >55 year	Yes	87	34.8
	No	67	26.8
	Don't know	96	38.4
Contraceptive Pills use	Yes	145	58.0
	No	16	6.4
	Don't know	89	35.6
Radiation exposure	Yes	208	83.2
	No	8	3.2
	Don't know	34	13.6

Table (3) shows that the majority of the studied females (83.2%) recognized exposure to radiation as risk factor followed by positive family history , heredity (81.2%) , followed by lack of breast feeding (77.6%). Also it shows that about 2/3 of the studied group (69.2%) identified increasing age as a risk factor while (82%) recognized current use of oral contraceptive pills as breast cancer risk factor, delayed menopause was the least identified risk factor (34.8%).

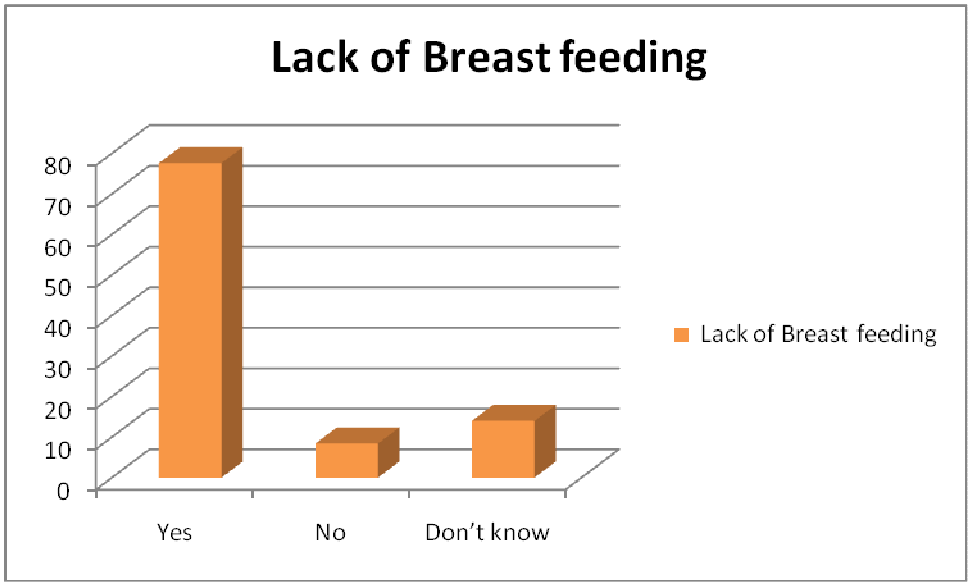

Fig . (2) : Distribution of the studied group regarding lack of breast feeding as a risk factor of breast cancer.

Fig . (3): Distribution of the studied group regarding delayed menopause as risk factor of breast cancer.

Table (4): Distribution of breast cancer symptoms and signs as identified by the studied group.

Distribution / **Variable**		**No. (250)**	**Percent % 100.0**
Changes in shape and size of the breast	Yes	206	82.4
	No	14	5.6
	Don't know	30	12.0
Breast Pain	Yes	84	33.6
	No	130	52.0
	Don't know	36	14.4
Bleeding per nipple	Yes	176	70.4
	No	29	11.6
	Don't know	45	18.0
Nipple retraction and ulceration	Yes	144	57.6
	No	27	10.8
	Don't know	77	30.8

Table (4) reveals that majority of respondents (82.4%) identified changes in shape and size of the breast as a sign of breast cancer and the least identified symptom is Breast Pain (33.6%).

Table (5): Distribution of the studied group according to their knowledge about breast cancer .

Distribution / Knowledge about breast cancer	No. (250)	Percent % 100.0
Unsatisfactory	40	16.0
Satisfactory	210	84.0

Table (5) reveals that majority of the studied group (84.0%) have satisfactory level of knowledge about breast cancer.

Table (6) Comparison between knowledge score about cancer breast of the studied group regarding their age.

Knowledge Score / Age	No. (250)	Range	$\bar{X}$ ± SD	t- test	P-value
< 40	146	30.67 - 86.67	72.01±12.04	1.5	> 0.05
≥40	104	26.67 - 90.33	69.68±12.2		

Table (6) shows that younger females (<40 year) achieve a higher knowledge score about cancer breast (72.01±12.04) than older females (≥40 year) with statistically non significant differences between the two groups,(P >0.05).

Table (7) Comparison between knowledge score about breast cancer of the studied group regarding their residence.

Knowledge score / Residence	No. (250)	Range	$\bar{X}$ ± SD	t- test	P-value
Urban	177	36.67-93.33	71.85±12.13	1.64	>0.05
Rural	73	26.67 - 93.33	69.09±12.01		

Table (7) reveals that women resided in urban areas attain higher knowledge score about cancer breast (71.85±12.13) than those from rural dewellers with statistically non significant difference. (P >0.05)

Table (8) Comparison of knowledge score about cancer breast of the studied group regarding their level of education.

Knowledge score / Education	No. (250)	Range	$\bar{X}$ ± SD	F- test	P- value
Illiterate or read and write	4	40.00 - 73.33	62.49±13.43	24.58	<0.05
School	59	55.15 - 93.33	63.33±7.20		
University	187	63.80- 93.33	73.90±10.37		

Table (8) clarifies that females with university educational level achieve the highest knowledge score among all females (73.90±13.43) with statistically significant differences. (P<0.05)

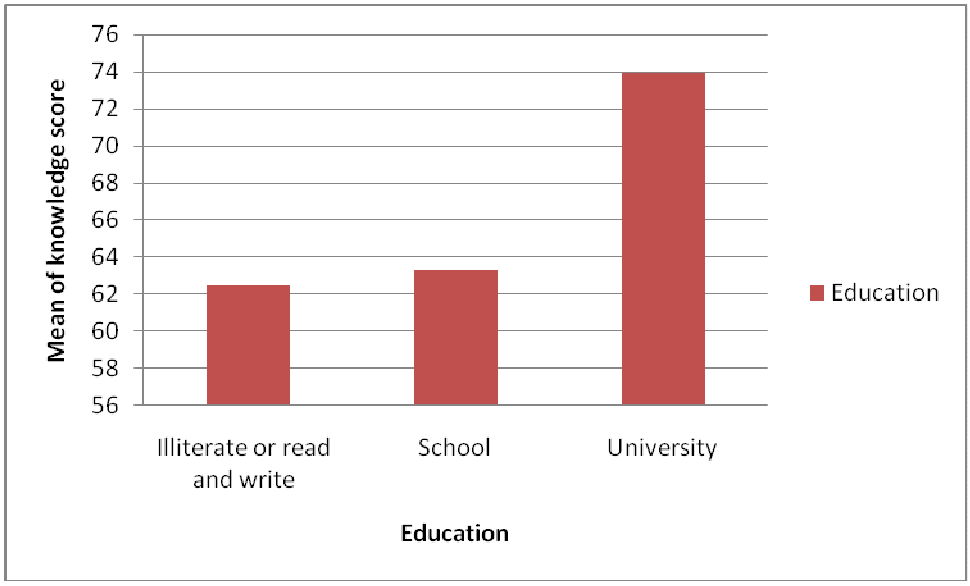

Fig . (4) Distribution of knowledge score about breast cancer of the studied group regarding their level of education.

Table (9) Comparison between knowledge score about cancer breast of the studied group regarding their social class

Knowledge score / Social class	No. (250)	Range	$\bar{X}$ ± SD	F test	P value
Low	6	50.00 - 73.33	59.44 ± 8.28	4.107	<0.05
Middle	35	36.67 - 86.67	68.38 ± 11.97		
High	209	26.67 - 93.33	71.82 ± 12.07		

Table (9) shows that there are statistically significant differences between knowledge score of low ,middle and high social classes with higher knowledge score among high social class participants (71.82± 12.07). (P<0.05)

Table (10) Comparison between knowledge Score about cancer breast of the studied group regarding their marital status.

Knowledge score / Marital Status	No. (250)	Range	$\bar{X}$ ± SD	t-test	P-value
Single	21	30.67-93.33	72.38 ± 12.31	0.528	>0.05
Married	229	53.33- 86.67	70.92 ± 10.23		

Table (10) clarifies that the knowledge score of single participants (72.38 ± 12.31) is higher than that of married ones (70.92 ± 10.23) with statistically non significant difference. (P>0.05)

Table (11) Comparison of knowledge score about cancer breast of married females who have children regarding the nature of feeding of their children.

Knowledge score / Feeding Nature	No. (228)	Range	$\bar{X}$ ± SD	F-test	P-value
Breast	150	53.33 - 93.33	73.91± 10.48	7.528	<0.05
Artificial	16	26.67 - 86.67	63.82 ± 9.44		
Mixed	62	46.67 - 93.33	68.42±14.09		

- The total number of married females is 228

Table (11) shows that the knowledge score about breast cancer of females who breast fed their children (73.91±10.48) is higher than that of females who practiced artificial or mixed feeding with statistically significant differences. (P<0.05)

Table (12) Comparison of knowledge score about cancer breast of the studied group regarding their family history of breast cancer.

Knowledge score / Family history of breast cancer	No. (250)	Range	$\bar{X}$ ± SD	t-test	P-value
Positive	25	59.3 - 88.7	74.12 ± 12.73	2.712	<0.05
Negative	225	55.06 - 79.26	67.16 ± 12.11		

Table (12) reveals that there is statistically significant difference between knowledge score of participants with positive family history and those with negative family history (74.12±12.73),(67.16±12.11) respectively.

Table(13) Distribution of (participants know BSE) according to some items of knowledge about it.

Variable / Distribution		No. (199)	Percent % 100.0
Age of Starting BSE Practice	Before 19	59	29.6
	After 19	102	51.3
	After menopause	17	8.5
	I don't know	21	10.6
Frequency of BSE practice	Once per week	7	3.5
	Once per month	162	81.4
	Once per year	25	12.6
	I do not know	5	2.5
Relation to the menstruation	One week before the period	7	3.52
	One week after the period	130	65.33
	No relation to the period	12	6.02
	I don't know	50	25.13

- The total number of females have knowledge about BSE is 199.

Table (13) clarifies that about half (51.3%) of the studied females know the exact age of starting BSE practice(After 19) and the majority of them (81.4%) realize that it should be done once per month and about 2/3 (65.33%)know that it should be done one week after the menstruation.

Table (14) Distribution of (participants know BSE) according to sources of knowledge about it.

Variable / Distribution		No. (199)	Percent % 100.0
Sources of knowledge About BSE	Radio and tv	81	40.70
	Newspaper	3	1.51
	Health care provider	41	20.60
	Friend	18	9.05
	reading and internet	56	28.14

- Total number of females know BSE is only 119

Table (14) clarifies that radio and TV (40.70%) are the main source of knowledge about breast self examination among the studied participants, followed by reading and internet (28.14%), then health care provider (20.60%) and the least sources identified are friends (9.05%) and newspaper (1.51%).

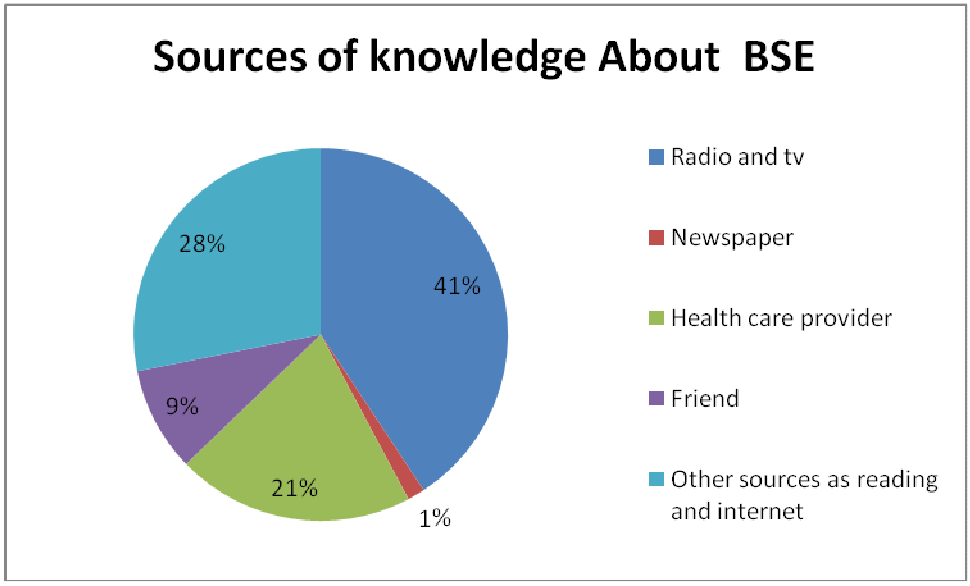

Fig . (5) : Distribution of sources of knowledge about breast self examination .

Table (15) Distribution of (participants know BSE) according to their knowledge score about breast self examination.

Distribution / Knowledge score about BSE	No. (199)	Percent % 100.0
Unsatisfactory	123	61.8
Satisfactory	76	38.2

Table (15) reveals that the majority of this group (61.8%) have unsatisfactory score of knowledge about BSE.

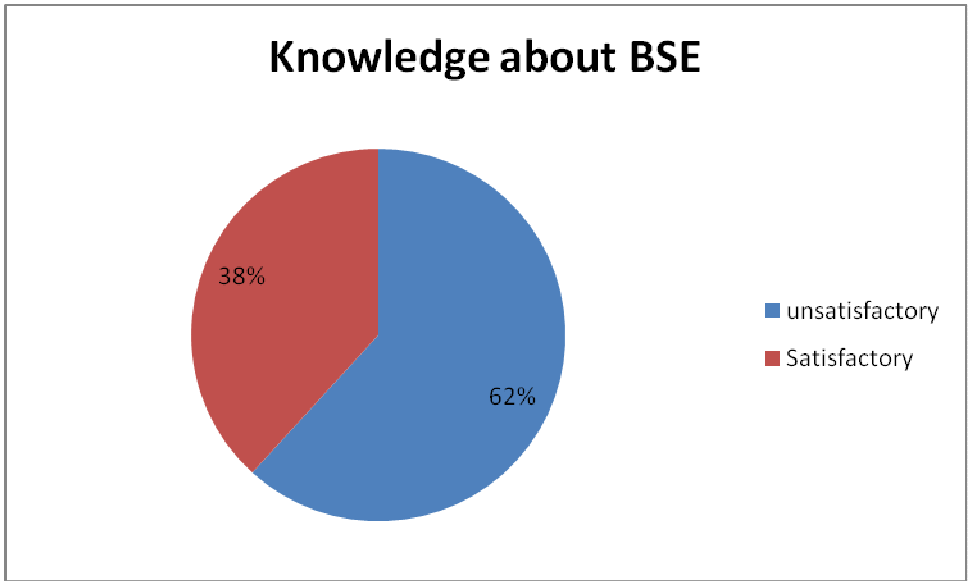

Fig .(8): Distribution of knowledge score about breast self examination .

Table (16) Comparison of the knowledge score about BSE of (participants know it) regarding their age.

Knowledge score about BSE / Age	No. (199)	Range	$\bar{X}$ ± SD	t-test	P-value
<40	103	10.02 - 75.13	40.11 ± 33.02	3.345	<0.05
≥40	96	20.59 - 91.07	55.83 ± 33.24		

Table (16) shows that the knowledge score about BSE of younger participants (<40 year) was (40.11±33.02) which is lower than that of older ones (≥40 year)(55.83±33.24) with statistically significant difference (P<0.05)

Table (17) Comparison of the knowledge score about BSE of (participants know it) regarding their residence.

Knowledge score about BSE / Residence	No. (199)	Range	$\overline{X}$ ± SD	t-test	P-value
Urban	155	12.27 - 89.89	47.5 ± 32.9	0.092	>0.05
Rural	44	1.79 - 76.71	46.98 ± 33.63		

Table (17) reveals that there is no statistically significant difference between the score of knowledge about BSE of urban and rural dwellers (47.5 ± 32.9) (46.98 ±33.63) respectively. P> 0.05

Table (18) Comparison of the knowledge score about BSE of participants know it regarding their level of education.

Knowledge score about BSE / Education	No. (199)	Range	$\bar{X}$ ± SD	F-test	P-value
Illiterate or read and write	3	5.22 - 60.00	47.18 ± 29.99	3.98	< 0.05
School	39	20.00 - 100.00	60.06 ± 30.12		
University	157	33.22 - 100.00	83.33 ± 14.43		

Table (18) clarifies that the score of knowledge about BSE of females with university educational level was (83.33±14.43) which is higher than that of females with lower levels of education. the difference is statistically significant. (P <0.05)

Table (19) Comparison of knowledge score about BSE of (participants know it) regarding their social class.

Knowledge score about BSE / Social class	No. (199)	Range	$\bar{X}$ ± SD	t-test	P-value
Middle	21	5.15 - 75.93	40.54 ± 33.39	3.649	<0.05
High	178	30.12 - 98.7	66.36 ± 30.34		

- According to Fahmy and El sherbini social score

Table (19) shows that the difference between knowledge score of middle and high social classes are (40.54±33.39) , (66.36±30.34) respectively ,with higher score among high social class participants which is statistically significant.(P<0.05)

Table (20) Comparison of knowledge score about BSE of (participants know it) regarding their marital status.

Knowledge score about BSE / Marital status	No. (199)	Range	$\overline{X}$ ± SD	t-test	P-value
Single	21	13.58 - 78.34	50.23 ± 33.56	1.325	> 0.05
Married	178	21.33 - 100.00	58.50 ± 26.22		

Table (20) clarifies that the knowledge score about BSE of single participants (50.23 ± 33.56) was lower than that of married participants (58.5 ± 26.22) with statistically non significant difference .(P>0.05)

Table (21) Comparison of knowledge score about BSE of (participants know it) regarding the nature of feeding of their children.

Knowledge score about BSE / Feeding	**No. (178)**	**Range**	**$\bar{X}$ ± SD**	**F- test**	**P-value**
Breast	115	90.00 - 100.00	67.54 ± 23.12	5.512	< 0. 05
Artificial	11	25.00 - 75.00	38.64 ± 20.50		
Mixed	52	25.00 - 100.00	62.14 ± 28.02		

- Total number of married females that know BSE is 178.

Table (21) reveals that the knowledge score about BSE of females who breast fed their children (67.54 ±23.12) is higher than that of females who practiced artificial or mixed feeding which is statistically significant difference.($p<0.05$)

Table (22) comparison of knowledge score about BSE of (participants know it) regarding their family history of breast cancer.

Knowledge score about BSE / Family history	No. (199)	Range	$\bar{X}$ ± SD	t- test	P-value
Positive	25	20.30 - 90.20	55.00 ± 30.56	2.294	<0.05
Negative	174	3 – 75.2	37.98 ± 35.22		

Table (22) clarifies that the knowledge score about BSE of participants with positive family history of breast cancer (55.00 ± 30.56) is higher than that of those with negative family history of breast cancer (37.98 ± 35.22), with a statistically significant difference.($p<0.05$)

Table (23) comparison between knowledge score of (participants who know BSE) regarding their practice of it .

Knowledge Score about BSE / Practice of BSE	No. (199)	Range	$\bar{X}$ ± SD	t-test	P-value
Performers	112	61.39 - 100	74.35 ± 10.97	3.606	<0.05
Non performers	87	55.94 - 80.78	68.36 ± 12.42		

Table (23) shows that there is statistically significant difference (P<0.05) between knowledge score about breast cancer among performers of BSE (74.35 ± 10.97) and non performers (68.36 ± 12.42).

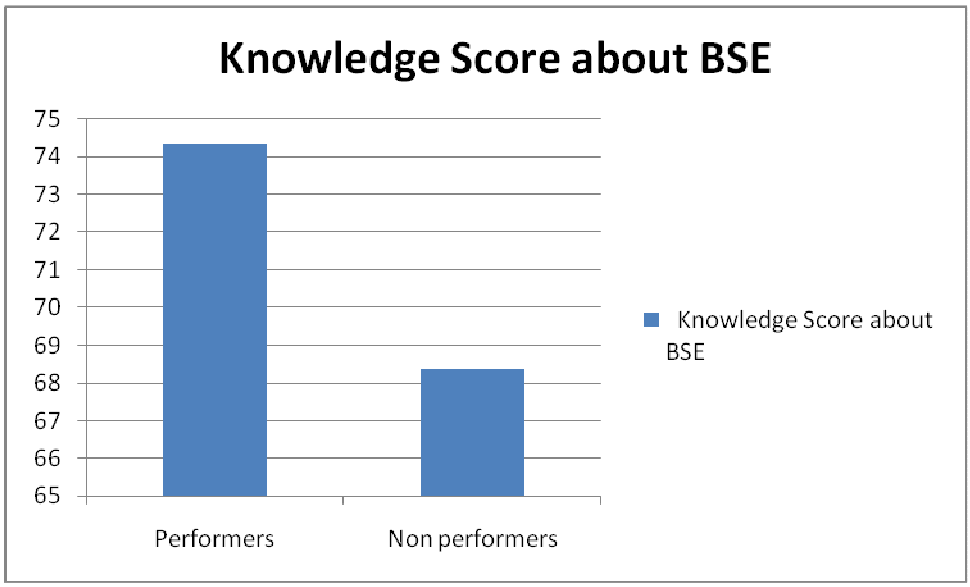

Fig . (6) : Distribution of Knowledge score about BSE among performers and non performers of BSE.

Table (24) Distribution of barriers against practice of breast self examination of non performers among those have knowledge about BSE.

Variable / Distribution		No. (87)	Percent % 100.0
Barriers of BSE practice	I do not have time to do BSE	20	23
	Not at risk of breast cancer	34	39
	Afraid of discovering any abnormality	30	34.5
	Not convinced with BSE	3	3.5

- The total number of females not performing BSE inspite of having knowledge about it (have barriers) is 87

Table (24) reveals that the most common barrier agaist BSE practice was absence of risk (39%) then fears of discovering any breast abnormality (34.5%) . The least identified barrier is that the female not convinced with BSE (3.5%)

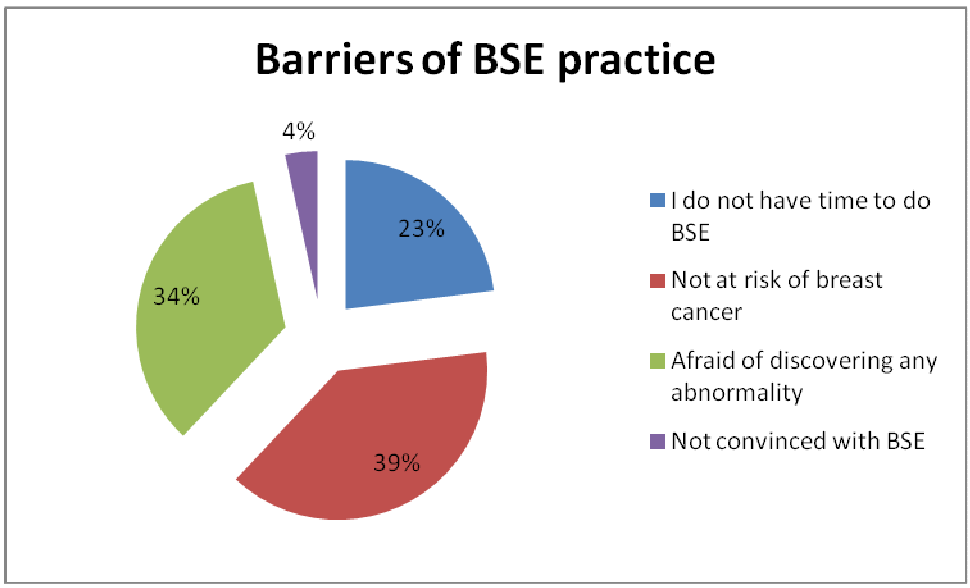

Fig . (7) : Distribution of barriers against the practice of breast self examination among non performers .

Table (25) Distribution of performers of BSE regarding positions and technique of it.

Variable / Distribution		No. (112)	Percent % 100.0
Inspection of the breast in front of the mirror	Yes	75	67
	No	37	33
Palpation of the breast by hands	Yes	100	89.3
	No	12	10.7
Examination of the breast	lying position	35	35
	standing position	77	77

- The total number of females who perform BSE is 112

Table (25) shows that 67% of performers inspect their breasts in front of the mirror while 89.3% palpate them by hand, 35% of them do BSE while lying and 77% do it while standing.

Table (26) Comparison of practice score of BSE performers regarding their age.

Practice score / Age	No. (112)	Range	$\bar{X}$ ± SD	t- test	P-value
<40	46	25.08 - 70.13	47.61 ± 20.52	2.426	<0.05
≥40	66	33.51 - 83.35	58.43 ± 24.92		

Table (26) clarifies that the practice score of younger participants (<40 year) was (47.61±20.52) which is lower than that of older ones (≥40) (58.43±24.92) with statistically significant difference.($p<0.05$)

Table (27) Comparison of practice score of BSE performers regarding their residence.

Practice score / Residence	No. (112)	Range	$\bar{X}$ ± SD	t-test	P-value
Urban	86	31.12-79.34	55.23 ± 22.11	2.308	<0.05
Rural	26	22.11-65.59	43.85 ± 21.74		

Table (27) shows that the practice score of urban dwellers was (55.23±22.11) which is higher than that of rural dwellers (43.85±21.74) with statistically significant difference (P<0.05)

Table (28) Comparison of practice score of BSE performers regarding their level of education.

Practice score / Education	No. (112)	Range	$\bar{X}$ ± SD	t- test	P-value
School	17	12.30 - 80.00	40.47 ± 20.96	3.125	<0.05
University	95	15.10 - 100.00	60.68 ± 25.12		

Table (28) shows that practice score of participants with university educational level (60.68±25.12) was higher than participants with school educational level (40.47±20.96) with statistically significant difference (P<0.05)

Table (29) Comparison of practice score of BSE performers regarding their marital status.

Practice score / Marital status	No. (112)	Range	$\bar{X}$ ± SD	t-test	P-value
Single	6	12.42-59.58	35.0 ± 22.58	2.653	<0.05
Married	106	35.55-84.49	60.02 ± 22.47		

Table (29) shows that practice score of single participants was (35.0±22.58) which is lower than that of married participants (60.02±22.47) with statistically significant difference (P<0.05) .

Table (30) Comparison of practice score of breast self examination of married females among performers regarding the nature of feeding of their children.

Practice score / Feeding	No. (106)	Range	$\bar{X}$ ± SD	F-test	P-value
Breast	58	40.00 - 100.00	67.89 ± 20.77	5.854	< 0.05
Artificial	15	15.00 - 90.00	43.64 ± 39.57		
Mixed	33	25 - 100.00	64.30 ± 24.19		

- The total number of married females , who perform BSE is 106.

Table (30) clarifies that the practice score of BSE of females who breast fed their children (67.89±20.77) is higher than that of females who practiced artificial or mixed feeding with statistically significant difference. (P<0.05)

Table (31) Comparison of practice score of BSE performers regarding their social class.

Practice score / Social class	No. (112)	Range	$\bar{X}$ ± SD	t-test	P-value
Middle	11	17.07 - 64.21	40.64 ± 21.57	2.243	<0.05
High	101	32.13 - 80.99	56.56 ± 22.43		

Table (31) reveals that the practice score of high social class females was (53.56±22.43) which is higher than that of middle social class females (43.64±21.57) with a statistically significant difference. (P<0.05)

Table (32) Comparison of practice score of BSE performers regarding their family history of breast cancer.

Practice score / Family history of breast cancer	No. (112)	Range	$\bar{X}$ ± SD	t-test	P-value
Positive	13	30.99 - 80.29	55.64 ± 22.65	2.189	<0.05
Negative	99	20.78 - 64.46	42.62 ± 19.84		

Table (32) shows that the practice score of participants with positive family history of breast cancer was (55.64±22.65),which is higher than of those with negative family history of breast cancer (42.62±19.84) with a statistically significant difference. (P<0.05)

Table (33) distribution of the studied group according to their attitude towards breast self examination.

Variables / Distribution		No. (250)	Percent % 100.0
BC can be cured if detected early by BSE	Yes	223	89.2
	No	4	1.6
	Un certain	23	9.2
BSE is difficult to be done by oneself	Yes	66	26.4
	No	165	66.0
	Un certain	19	7.6
BSE is Imparassing	Yes	76	30.4
	No	149	59.6
	Un certain	25	10.0
I need to know how to do BSE	Yes	226	90.4
	No	8	3.2
	Un certain	16	6.4
BSE need to be Encouraged	Yes	241	96.4
	No	0	0.0
	Un certain	9	3.6
I will try to educat my friends and relatives	Yes	188	75.2
	No	41	16.4
	Un certain	21	8.4
No Religious barriers against BSE practice	Yes	231	92.4
	No	5	2.0
	Un certain	14	5.6
No Traditional barriers against BSE practice	Yes	218	87.2
	No	12	4.8
	Un certain	19	7.6

Table (33) shows that about (66%) of respondents mentioned that it is not difficult to be done,and (59.6%) mentioned that it is not imparssing. also it is illustrated that the majority of participants (90.4%), (96.4%),(75.2%) have positive attitude towards desire to know steps of BSE,encourage others to do it and even educat others how to do it

respectively and the majority of participants (92.4%),(87.2%) mentioned that religion and traditions are not barriers against BSE practice.

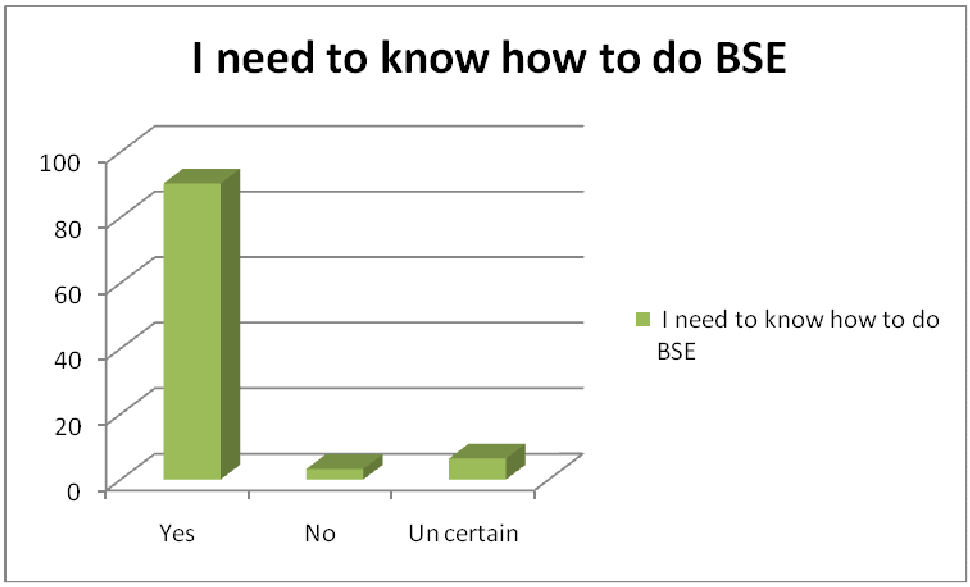

Fig. (9): Distribution of the studied group regarding the desire to know how to do breast self examination.

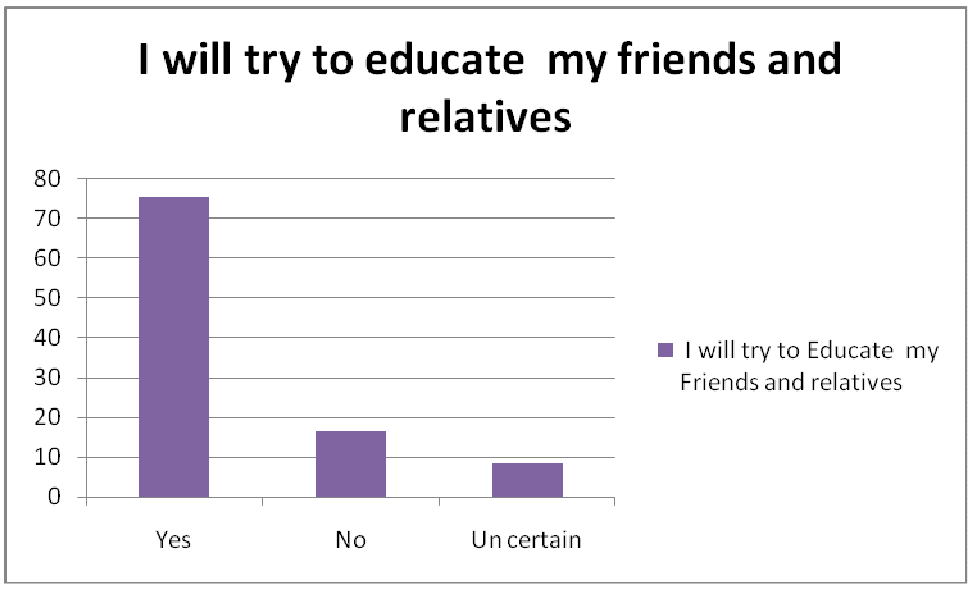

Fig. (10): Distribution of the studied group regarding readiness to educate friends and relatives.