

Table 7.2 (a): Three Factors Mixed Repeated Measure ANOVA: The Effect of Types of Surgery on the Relationship Satisfaction of Couples with Breast Cancer.

Source of Variation	ss	df	ms	f	sign
Within Subjects Effect:					
Couples with Breast Cancer (Groups)	465.704	1	465.704	19.951	p<0.001
Groups x Types of Surgery	5.080	1	5.080	0.218	ns
Relationship Satisfaction (Time)	373.352	1.929	193.581	10.688	p<0.001
Time x Types of Surgery	109.938	2	54.969	3.147	p<0.05
Groups x Time	106.612	1.827	58.344	4.387	p<0.05
Groups x Time x Types of Surgery	93.695	2	46.848	3.855	p<0.05
Between Subjects Effect:					
(Effect of Types of Surgery)	27.796	1	27.796	0.444	ns

Table 7.2 (b): Three Factors Mixed Repeated Measure ANOVA: The Affect of Breast Cancer Stages on the Relationship Satisfaction of Couples with Breast Cancer.

Source of Variation	ss	df	ms	f	sign
Within Subjects Effect:					
Couples with Breast Cancer (Groups)	653.819	1	653.819	27.807	p<0.001
Groups x Breast Cancer Stages	1.782	1	1.782	0.076	ns
Relationship Satisfaction (Time)	327.004	2	163.502	9.303	p<0.001
Time x Breast Cancer Stages	33.897	2	16.949	0.964	ns
Groups x Time	23.125	1.876	12.326	0.968	ns
Groups x Time x Breast Cancer Stages	12.815	2	6.407	0.536	ns
Between Subjects Effect:					
(Effect of Breast Cancer Stages)	24.201	1	24.201	0.390	ns

Table 7.2 (c): Three Factors Mixed Repeated Measure ANOVA: The Effect of Menopausal Status on the Relationship Satisfaction of Couples with Breast Cancer.

Source of Variation	ss	df	ms	f	sign
Within Subjects Effect:					
Couples with Breast Cancer (Groups)	604.666	1	604.666	26.169	p<0.001
Groups x Menopausal Status	0.018	1	0.018	0.001	ns
Relationship Satisfaction (Time)	284.404	1.927	147.605	8.404	p<0.001
Time x Menopausal Status	33.897	2	16.949	0.964	ns
Groups x Time	1.543	2	0.772	0.046	ns
Groups x Time x Menopausal Status	68.270	2	34.135	2.697	ns
Between Subjects Effect:					
(Effect of Menopausal Status)	31.383	1	31.383	0.482	ns

Table 7.2 (d): Three Factors Mixed Repeated Measure ANOVA: The Effect of Ethnicity on the Relationship Satisfaction of Couples with Breast Cancer.

Source of Variation	ss	df	ms	f	sign
Within Subjects Effect:					
Couples with Breast Cancer (Groups)	690.012	1	690.012	29.342	p<0.001
Groups x Ethnicity	1.706	2	0.853	0.036	ns
Relationship Satisfaction (Time)	380.062	1.938	196.075	10.933	p<0.001
Time x Ethnicity	170.727	4	42.682	2.456	p<0.05
Groups x Time	57.905	1.831	31.632	2.345	ns
Groups x Time x Ethnicity	57.888	4	14.472	1.172	ns
Between Subjects Effect:					
(Effect of Ethnicity)	408.171	2	240.086	4.001	p<0.05

Table 1 (a): Three Factors Mixed Repeated Measure ANOVA: The Effect of Types of Surgery on the Psychological Aspect of Couples with Breast Cancer.

Source of Variation	ss	df	ms	f	sign
Anxiety					
Within Subjects Effect:					
Couples with Breast Cancer (Groups)	123.357	1	123.357	14.776	p<0.001
Groups x Types of Surgery	4.122	1	4.122	0.494	ns
Anxiety (Time)	403.972	2	201.986	22.386	p<0.001
Time x Types of Surgery	43.628	2	21.814	2.418	ns
Groups x Time	28.906	2	14.453	2.249	ns
Groups x Time x Types of Surgery	17.225	2	8.612	1.340	ns
Between Subjects Effect: (Effect of Types of Surgery)	6.972	1	6.972	0.404	ns
Depression					
Within Subjects Effect:					
Couples with Breast Cancer (Groups)	18.392	1	18.392	1.897	ns
Groups x Types of Surgery	3.106	1	3.106	0.320	ns
Depression (Time)	754.602	2	377.301	52.546	p<0.001
Time x Types of Surgery	95.392	2	47.696	6.643	p<0.01
Groups x Time	64.224	2	32.112	6.315	p<0.01
Groups x Time x Types of Surgery	1.829	2	0.914	0.180	ns
Between Subjects Effect: (Effect of Types of Surgery)	0.769	1	0.769	0.40	ns

Table 1 (b): Three Factors Mixed Repeated Measure ANOVA: The Effect of Breast Cancer Stages on the Psychological Aspect of Couples with Breast Cancer.

Source of Variation	ss	df	ms	f	sign
Anxiety					
Within subjects effect:					
Couples with Breast Cancer (Groups)	123.833	1	123.833	14.702	p<0.001
Groups x Breast Cancer Stages	1.379	1	1.397	0.164	ns
Anxiety (Time)	382.070	2	191.035	20.378	p<0.001
Time x Breast Cancer Stages	1.918	2	0.959	0.102	ns
Groups x Time	22.652	2	11.326	1.845	ns
Groups x Time x Breast Cancer Stages	7.926	2	3.963	0.646	ns
Between Subjects Effect: (Effect of Breast Cancer Stages)	17.794	1	17.794	1.040	ns
Depression					
Within Subjects Effect:					
Couples with Breast Cancer (Groups)	51.665	1	51.665	5.186	p<0.05
Groups x Breast Cancer Stages	4.665	1	4.665	0.468	ns
Depression (Time)	650.038	2	325.019	43.677	p<0.001
Time x Breast Cancer Stages	5.288	2	2.644	0.355	ns
Groups x Time	115.458	2	57.729	11.665	p<0.01
Groups x Time x Breast Cancer Stages	14.30	2	7.215	1.458	ns
Between Subjects Effect: (Effect of Breast Cancer Stages)	15.667	1	15.667	0.830	ns

Table 1 (c): Three Factors Mixed Repeated Measure ANOVA: The Effect of Menopausal Status on the Psychological Aspect of Couples with Breast Cancer.

Source of Variation	ss	df	ms	f	sign
Anxiety					
Within Subjects Effects:					
Couples with Breast Cancer (Groups)	147.552	1	147.552	17.329	p<0.001
Groups x Menopausal Status	0.256	1	0.256	0.30	ns
Anxiety (Time)	364.058	2	182.029	19.358	p<0.001
Time x Menopausal Status	6.975	2	3.487	0.371	ns
Groups x Time	39.822	2	19.911	19.911	p<0.05
Groups x Time x Menopausal Status	11.341	2	5.670	0.875	ns
Between Subjects Effect: (Effect of Menopausal Status)	5.044	1	5.044	0.284	ns
Depression					
Within Subjects Effect:					
Couples with Breast Cancer (Groups)	40.568	1	40.568	4.143	p<0.05
Groups x Menopausal Status	5.517	1	5.517	0.563	ns
Depression (Time)	605.340	2	302.670	41.551	p<0.001
Time x Menopausal Status	15.525	2	7.762	1.066	ns
Groups x Time	126.494	2	63.247	12.383	p<0.001
Groups x Time x Menopausal Status	5.475	2	2.738	0.536	ns
Between Subjects Effect: (Effect of Menopausal Status)	1.204	1	1.204	0.059	ns

Table 1 (d): Three Factors Mixed Repeated Measure ANOVA: The Effect of Ethnicity on the Psychological Aspect of Couples with Breast Cancer.

Source of Variation	ss	df	ms	f	sign
Anxiety					
Within Subject Effects:					
Couples with Breast Cancer (Groups)	145.296	1	145.296	17.448	p<0.001
Groups x Ethnicity	15.774	2	7.887	0.947	ns
Anxiety (Time)	388.740	2	194.370	21.185	p<0.001
Time x Ethnicity	14.833	4	3.708	0.404	ns
Groups x Time	43.355	2	21.677	3.409	p<0.05
Groups x Time x Ethnicity	51.128	4	12.782	2.010	ns
Between Subjects Effect: (Effect of Ethnicity)	15.966	2	7.983	0.461	ns
Depression					
Within Subjects Effects:					
Couples with Breast Cancer (Groups)	44.630	1	44.630	4.581	p<0.05
Groups x Ethnicity	5.833	1	2.916	0.299	ns
Depression (Time)	714.975	2	357.487	49.008	p<0.001
Time x Ethnicity	74.610	4	18.653	2.557	p<0.05
Groups x Time	119.444	2	59.722	11.750	p<0.001
Groups x Time x Ethnicity	12.749	4	3.187	0.627	ns
Between Subjects Effect: (Effect of Ethnicity)	9.133	2	4.566	0.235	ns

Table 3 (a): Three Factors Mixed Repeated Measure ANOVA: The Effect of Types of Surgery on the Coping Strategies of Couples with Breast Cancer.

Source of Variation	ss	df	ms	f	sign
Active Coping					
Within Subjects Effect:					
Couples with Breast Cancer (Groups)	213.062	1	213.062	130.076	p<0.001
Groups x Types of Surgical	0.662	1	0.662	0.404	ns
Active Coping (Time)	350.857	2	175.428	97.799	p<0.001
Time x Types of Surgery	10.581	2	5.290	2.949	ns
Groups x Time	36.865	1.960	18.811	19.600	p<0.001
Groups x Time x Types of Surgery	0.716	2	0.358	0.381	ns
Between Subjects Effect: (Effect of Types of Surgery)	7.951	1	7.951	1.686	ns
Planning					
Within Subjects Effect:					
Couples with Breast Cancer (Groups)	146.727	1	146.727	41.721	p<0.001
Groups x Types of Surgery	10.056	1	10.056	2.856	ns
Planning (Time)	94.257	1.101	85.637	71.428	p<0.001
Time x Types of Surgery	5.887	2	2.944	4.461	p<0.05
Groups x Time	24.732	1.111	22.261	18.161	p<0.001
Groups x Time x Types of Surgery	5.619	2	2.810	4.126	p<0.05
Between Subjects Effect: (Effect of Types of Surgery)	16.396	1	16.396	2.371	ns
Positive Reframing					
Within Subjects Effect:					
Couples with Breast Cancer (Groups)	8.235	1	8.235	2.472	ns
Groups x Types of Surgery	10.553	1	10.553	3.168	ns
Positive Reframing (Time)	133.901	1.743	76.829	49.956	p<0.001
Time x Types of Surgery	8.253	2	4.127	3.079	p<0.05
Groups x Time	16.147	1.795	8.994	6.214	p<0.01
Groups x Time x Types of Surgery	2.313	2	1.156	0.890	ns
Between Subjects Effect: (Effect of Types of Surgery)	13.863	1	13.863	3.211	ns
Acceptance					
Within Subjects Effect:					
Couples with Breast Cancer (Groups)	11.093	1	11.093	6.380	p<0.05
Groups x Types of Surgery	0.647	1	0.647	0.372	ns
Acceptance (Time)	6.035	1.518	3.976	1.735	ns
Time x Types of Surgery	2.290	2	1.145	0.658	ns
Groups x Time	30.832	1.948	15.827	14.151	p<0.01
Groups x Time x Types of Surgery	0.616	2	0.308	0.283	ns
Between Subjects Effect: (Effect of Types of Surgery)	5.303	1	5.303	0.992	ns

Table 3 (a), Continued.

	ms	df	ss	f	sign
Using Emotional Support					
Within Subjects Effect:					
Couples with Breast Cancer (Groups)	27.855	1	27.855	12.413	p<0.01
Groups x Types of Surgery	9.358	1	9.358	4.170	p<0.05
Using Emotional Support (Time)	80.091	1.935	41.399	17.549	p<0.001
Time x Types of Surgery	2.290	2	1.145	0.658	ns
Groups x Time	7.493	2	3.746	1.642	p<0.05
Groups x Time x Types of Surgery	3.916	2	1.958	1.263	ns
Between Subjects Effect:					
(Effect of Types of Surgery)	8.287	1	8.287	1.904	ns
Using Instrumental Support					
Within Subjects Effect:					
Couples with Breast Cancer (Groups)	23.760	1	23.760	8.409	p<0.01
Groups x Types of Surgery	11.989	1	11.989	4.243	p<0.05
Using Instrumental Support (Time)	110.731	2	55.365	25.943	p<0.05
Time x Types of Surgery	15.495	2	7.748	3.630	p<0.05
Groups x Time	10.436	1.801	5.793	3.076	p<0.05
Groups x Time x Types of Surgery	2.130	2	1.065	0.628	ns
Between Subjects Effect:					
(Effect of Types of Surgery)	3.942	1	3.942	0.947	ns
Self-distraction					
Within Subjects Effect:					
Couples with Breast Cancer (Groups)	3.837	1	3.837	1.132	ns
Groups x Types of Surgery	1.442	1	1.442	0.425	ns
Self-distraction (Time)	97.804	1.654	59.146	30.746	p<0.001
Time x Types of Surgery	10.947	2	5.473	3.441	p<0.05
Groups x Time	9.952	1.868	5.328	4.288	p<0.05
Groups x Time x Types of Surgery	2.092	2	1.046	0.901	ns
Between Subjects Effect:					
(Effect of Types of Surgery)	0.729	1	0.729	0.135	ns
Denial					
Within Subjects Effect:					
Couples with Breast Cancer (Groups)	431.660	1	431.660	129.112	p<0.001
Groups x Types of Surgery	2.501	1	2.501	0.748	ns
Denial (Time)	195.338	1.144	170.694	259.747	p<0.001
Time x Types of Surgery	0.043	2	0.021	0.057	ns
Groups x Time	203.418	1.141	178.283	265.689	p<0.001
Groups x Time x Types of Surgery	0.004	2	0.002	0.005	ns
Between Subjects Effect:					
(Effect of Types of Surgery)	0.001	1	0.001	0.000	ns
Venting					
Within Subjects Effect:					
Couples with Breast Cancer (Groups)	161.377	1	161.377	37.968	p<0.001

Table 3 (a), Continued.

	ss	df	ms	f	sign
Groups x Types of Surgery	0.188	1	0.188	0.044	ns
Venting (Time)	146.240	2	73.120	128.170	p<0.001
Time x Types of Surgery	0.465	2	0.233	0.408	ns
Groups x Time	157.622	2	78.811	130.146	p<0.001
Groups x Time x Types of Surgery	0.772	2	0.386	0.6385	ns
Between Subjects Effect: (Effect of Types of Surgery)	0.635	1	0.635	0.097	ns
Behavioral Disengagement					
Within Subjects Effect:					
Couples with Breast Cancer (Groups)	328.011	1	328.011	132.124	p<0.001
Groups x Types of Surgery	8.903	1	8.903	3.586	ns
Behavioral disengagement (Time)	0.264	1.087	0.243	0.630	p<0.001
Time x Types of Surgery	0.315	2	0.157	0.571	ns
Groups x Time	0.691	1.084	0.637	1.633	ns
Groups x Time x Types of Surgery	0.946	2	0.473	2.235	ns
Between Subjects Effect: (Effect of Types of Surgery)	0.542	1	0.542	0.178	ns
Self-blame					
Within Subjects Effect:					
Couples with Breast Cancer (Groups)	123.120	1	123.120	41.143	p<0.001
Groups x Types of Surgery	0.054	1	0.054	0.018	ns
Self-blame (Time)	0.325	1.597	0.204	3.172	p<0.001
Time x Types of Surgery	0.079	2	0.040	0.771	ns
Groups x Time	0.732	1.622	0.451	7.369	p<0.01
Groups x Time x Types of Surgery	0.027	2	0.013	0.270	ns
Between Subjects Effect: (Effect of Types of Surgery)	3.271	1	3.271	0.760	ns
Problem-focused Strategy					
Within Subjects Effect:					
Couples with Breast Cancer (Groups)	566.992	1	566.992	34.156	p<0.001
Groups x Types of Surgery	66.363	1	66.363	3.998	ns
Problem focus strategy (Time)	237.020	1.910	124.090	13.368	p<0.001
Time x Types of Surgery	90.421	2	45.211	5.100	p<0.01
Groups x Time	42.494	1.779	23.884	3.551	p<0.05
Groups x Time x Types of Surgery	3.428	2	1.714	0.286	ns
Between Subjects Effect: (Effect of Types of Surgery)	86.993	1	86.993	2.414	ns
Emotion-focused Strategy					
Within Subjects Effect:					
Couples with Breast Cancer (Groups)	3002.846	1	3002.846	150.232	p<0.001
Groups x Types of Surgery	8.574	1	8.574	0.429	ns
Emotion focus strategy (Time)	190.086	2	95.043	6.065	p<0.001

Table 3 (a), Continued.

	ss	df	ms	f	sign
Time x Types of Surgery	143.882	2	71.941	4.591	p<0.01
Groups x Time	269.242	2	134.621	16.564	p<0.001
Groups x Time x Types of Surgery	42.953	2	21.476	2.643	ns
Between Subjects Effect: (Effect of Types of Surgery)	93.406	1	93.406	1.809	ns

Note: The domain of Humor, Religion and Substance Use for brief COPE were excluded from the analysis as the assumptions for parametric test were unmet

Table 3 (b): Three Factors Mixed Repeated Measure ANOVA: The Effect of Breast Cancer Stages on the Coping Strategies of Couples with Breast Cancer.

Source of Variation	ss	df	ms	f	sign
Active coping					
Within Subjects Effect:					
Couples with Breast Cancer (Groups)	250.131	1	250.131	157.778	p<0.001
Groups x Breast Cancer Stages	0.039	1	0.039	0.024	ns
Active coping (Time)	377.251	2	188.625	103.653	p<0.001
Time x Breast Cancer Stages	11.052	2	5.526	3.037	ns
Groups x Time	57.296	2	28.648	30.079	p<0.001
Groups x Time x Breast Cancer Stages	0.208	2	0.104	0.109	ns
Between Subjects Effect: (Effect of Breast Cancer Stages)	0.448	1	0.448	0.092	ns
Planning					
Within Subjects Effect:					
Couples with Breast Cancer (Groups)	116.751	1	116.751	32.492	p<0.001
Groups x Breast Cancer Stages	9.621	1	9.621	2.678	ns
Planning (Time)	92.142	1.080	85.331	70.897	p<0.001
Time x Breast Cancer Stages	0.100	2	0.050	0.077	ns
Groups x Time	32.345	1.095	29.530	23.898	p<0.001
Groups x Time x Breast Cancer Stages	0.099	2	0.050	0.073	ns
Between Subjects Effect: (Effect of Breast Cancer Stages)	7.766	1	7.766	1.091	ns
Positive Reframing					
Within Subjects Effect:					
Couples with Breast Cancer (Groups)	25.791	1	25.791	8.415	p<0.001
Groups x Breast Cancer Stages	13.643	1	13.643	4.452	P<0.05
Positive Reframing (Time)	118.874	1.698	70.003	42.515	p<0.001
Time x Breast Cancer Stages	1.453	2	0.727	0.520	ns
Groups x Time	27.081	1.802	15.025	10.960	p<0.001
Groups x Time x Breast Cancer Stages	3.548	2	1.774	1.436	ns
Between Subjects Effect: (Effect of Breast Cancer Stages)	0.972	1	0.972	0.219	ns
Acceptance					
Within Subjects Effect:					
Couples with Breast Cancer (Groups)	13.798	1	13.798	7.971	p<0.01
Groups x Breast Cancer Stages	5.427	1	5.427	3.135	ns
Acceptance (Time)	17.017	1.539	11.054	4.836	p<0.05
Time x Breast Cancer Stages	6.031	2	3.016	1.714	ns
Groups x Time	37.318	1.924	19.391	16.510	p<0.001
Groups x Time x Breast Cancer Stages	2.757	2	1.379	1.220	ns
Between Subjects Effect: (Effect of Breast Cancer Stages)	0.840	1	0.840	0.160	ns

Table 3 (b), Continued.

	ss	df	ms	f	sign
Using Emotional Support					
Within Subjects Effect:					
Couples with Breast Cancer (Groups)	11.257	1	11.257	4.940	p<0.05
Groups x Breast Cancer Stages	1.419	1	1.419	0.623	ns
Using Emotional Support (Time)	65.763	1.907	34.481	14.358	p<0.001
Time x Breast Cancer Stages	1.971	2	0.986	0.430	ns
Groups x Time	19.520	2	9.760	6.490	p<0.01
Groups x Time x Breast Cancer Stages	7.747	2	3.873	2.576	ns
Between Subjects Effect: (Effect of Breast Cancer Stages)	10.998	1	10.998	2.505	ns
Using Instrumental Support					
Within Subjects Effect:					
Couples with Breast Cancer (Groups)	11.095	1	11.095	3.801	p<0.01
Groups x Breast Cancer Stages	0.539	1	0.539	0.185	ns
Using Instrumental Support (Time)	89.050	2	44.525	20.771	p<0.001
Time x Breast Cancer Stages	0.828	2	0.414	0.193	ns
Groups x Time	25.778	1.818	14.181	8.139	p<0.001
Groups x Time x Breast Cancer Stages	4.111	2	2.055	1.298	ns
Between Subjects Effect: (Effect of Breast Cancer Stages)	3.955	1	3.955	0.933	ns
Self-distraction					
Within Subjects Effect:					
Couples with Breast Cancer (Groups)	4.090	1	4.090	1.331	ns
Groups x Breast Cancer Stages	3.747	1	3.747	1.220	ns
Self-distraction (Time)	84.036	1.663	50.524	26.305	p<0.001
Time x Breast Cancer Stages	2.416	2	1.208	0.756	ns
Groups x Time	20.581	1.897	10.852	9.332	p<0.001
Groups x Time x Breast Cancer Stages	0.034	2	0.017	0.016	ns
Between Subjects Effect: (Effect of Breast Cancer Stages)	2.339	1	2.339	0.439	ns
Denial					
Within Subjects Effect:					
Couples with Breast Cancer (Groups)	466.794	1	466.794	140.296	p<0.001
Groups x Breast Cancer Stages	5.308	1	5.308	1.595	ns
Denial (Time)	260.379	1.155	225.460	347.283	p<0.001
Time x Breast Cancer Stages	0.671	2	0.335	0.894	ns
Groups x Time	274.240	1.148	238.951	359.393	p<0.001
Groups x Time x Breast Cancer Stages	1.115	2	0.557	1.461	ns
Between Subjects Effect: (Effect of Breast Cancer Stages)	4.964	1	4.964	0.808	ns

Table 3 (b), Continued.

	ss	df	ms	f	sign
Venting					
Within Subjects Effect:					
Couples with Breast Cancer (Groups)	195.928	1	195.928	45.201	p<0.001
Groups x Breast Cancer Stages	0.039	1	0.039	0.009	ns
Venting (Time)	183.265	2	91.632	160.505	p<0.001
Time x Breast Cancer Stages	0.274	2	0.137	0.240	ns
Groups x Time	204.283	2	102.141	170.993	p<0.001
Groups x Time x Breast Cancer Stages	0.331	2	0.155	0.260	ns
Between Subjects Effect:					
(Effect of Breast Cancer Stages)	2.391	1	2.391	0.371	ns
Behavioral Disengagement					
Within Subjects Effect:					
Couples with Breast Cancer (Groups)	330.096	1	330.096	140.951	p<0.001
Groups x Breast Cancer Stages	0.115	1	0.115	0.049	ns
Behavioral Disengagement (Time)	0.154	1.093	0.141	0.358	ns
Time x Breast Cancer Stages	0.025	2	0.012	0.057	ns
Groups x Time	0.265	1.088	0.244	0.604	ns
Groups x Time x Breast Cancer Stages	0.025	2	0.012	0.056	ns
Between Subjects Effect:					
(Effect of Breast Cancer Stages)	0.014	1	0.014	0.005	ns
Self-blame					
Within Subjects Effect:					
Couples with Breast Cancer (Groups)	154.982	1	154.982	55.298	p<0.001
Groups x Breast Cancer Stages	0.130	1	0.130	0.046	ns
Self-blame (Time)	0.611	1.515	0.403	6.129	p<0.01
Time x Breast Cancer Stages	0.092	2	0.046	0.926	ns
Groups x Time	0.050	1.527	0.687	10.756	p<0.001
Groups x Time x Breast Cancer Stages	0.013	2	0.006	0.131	ns
Between Subjects Effect:					
(Effect of Breast Cancer Stages)	1.445	1	1.445	0.336	ns
Problem-focused Strategy					
Within Subjects Effect:					
Couples with Breast Cancer (Groups)	418.663	1	418.663	24.625	p<0.01
Groups x Breast Cancer Stages	15.441	1	15.441	0.908	ns
Problem-focused strategy (Time)	127.201	1.938	65.650	6.975	p<0.01
Time x Breast Cancer Stages	5.118	2	2.559	0.281	ns
Groups x Time	63.403	1.765	35.917	5.590	p<0.01
Groups x Time x Breast Cancer Stages	8.458	2	4.229	0.746	ns
Between Subjects Effect:					
(Effect of Breast Cancer Stages)	2.456	1	2.456	0.064	ns

Table 3 (b), Continued.

	ss	df	ms	f	sign
Emotion-focused Strategy					
Within Subjects Effect:					
Couples with Breast Cancer (Groups)	3556.934	1	3556.934	179.077	p<0.001
Groups x Breast Cancer Stages	82.674	1	82.674	4.162	p<0.05
Emotion-focused Strategy (Time)	96.118	2	48.059	3.078	p<0.05
Time x Breast Cancer Stages	25.151	2	12.575	0.805	ns
Groups x Time	559.060	2	279.530	35.959	p<0.001
Groups x Time x Breast Cancer Stages	34.528	2	17.264	2.221	ns
Between Subjects Effect:					
(Effect of Breast Cancer Stages)	20.773	1	20.773	0.377	ns

Note: The domain of Humor, Religion and Substance Use for brief COPE were excluded from the analysis as the assumptions for parametric test were unmet.

Table 3 (c): Three Factors Mixed Repeated Measure ANOVA: The Effect of Menopausal Status on the Coping Strategies of Couples with Breast Cancer.

Source of Variation	ss	df	ms	f	sign
Active Coping					
Within Subjects Effect:					
Couples with Breast Cancer (Groups)	155.893	1	55.893	42.846	p<0.001
Groups x Menopausal Status	0.615	1	0.615	0.169	ns
Active Coping (Time)	86.103	1.103	78.081	61.968	p<0.001
Time x Menopausal Status	0.742	2	0.371	0.534	ns
Groups x Time	30.398	1.116	27.242	21.342	p<0.001
Groups x Time x Menopausal Status	0.843	2	0.421	0.592	ns
Between Subjects Effect: (Effect of Menopausal Status)	108.036	1	108.036	17.138	ns
Planning					
Within Subjects Effect:					
Couples with Breast Cancer (Groups)	155.893	1	155.893	42.846	p<0.001
Groups x Menopausal Status	0.615	1	0.615	0.169	ns
Planning (Time)	86.103	1.03	78.081	61.968	p<0.001
Time x Menopausal Status	0.742	2	0.371	0.534	ns
Groups x Time	30.398	1.116	27.242	21.342	p<0.001
Groups x Time x Menopausal Status	0.843	2	0.421	0.592	ns
Between Subjects Effect: (Effect of Menopausal Status)	106.036	1	108.036	17.138	p<0.001
Positive Reframing					
Within Subjects Effect:					
Couples with Breast Cancer (Groups)	38.626	1	38.626	11.443	p<0.01
Groups x Menopausal Status	4.816	1	4.816	1.427	ns
Positive Reframing (Time)	140.951	1.715	82.186	50.794	p<0.01
Time x Menopausal Status	2.043	2	1.022	0.736	ns
Groups x Time	29.877	1.799	16.605	11.364	p<0.001
Groups x Time x Menopausal Status	2.173	2	1.087	0.827	ns
Between Subjects Effect: (Effect of Menopausal Status)	71.443	1	71.443	17.975	ns
Source of Variation	ss	df	ms	f	sign
Acceptance					
Within Subjects Effect:					
Couples with Breast Cancer (Groups)	22.230	1	22.230	12.874	p<0.001
Groups x Menopausal Status	2.355	1	2.355	1.364	ns
Acceptance (Time)	13.759	1.498	9.187	3.998	p<0.001
Time x Menopausal Status	1.634	2	0.817	0.475	ns
Groups x Time	33.140	2	16.570	15.735	p<0.001
Groups x Time x Menopausal Status	1.848	2	0.924	0.877	ns
Between Subjects Effect: (Effect of Menopausal Status)	1.167	1	1.167	0.216	ns

Table 3 (c), Continued.

	ss	df	ms	f	sign
Using Emotional Support					
Within Subjects Effect:					
Couples with Breast Cancer (Groups)	20.178	1	20.178	8.942	p<0.01
Groups x Menopausal Status	0.085	1	0.085	0.038	ns
Using Emotional Support (Time)	65.597	1.900	34.526	14.284	p<0.001
Time x Menopausal Status	10.166	2	5.058	2.203	ns
Groups x Time	10.837	1.941	5.583	3.555	p<0.05
Groups x Time x Menopausal Status	3.068	2	1.534	1.007	ns
Between Subjects Effect: (Effect of Menopausal Status)	49.171	1	49.171	11.647	p<0.01
Using Instrumental Support					
Within Subjects Effect:					
Couples with Breast Cancer (Groups)	10.637	1	10.639	3.493	ns
Groups x Menopausal Status	0.195	1	0.195	0.064	ns
Using Instrumental Support (Time)	82.417	2	41.209	19.332	p<0.001
Time x Menopausal Status	2.015	2	1.007	0.473	ns
Groups x Time	22.260	1.801	12.359	6.363	p<0.01
Groups x Time x Menopausal Status	2.302	2	1.151	0.658	ns
Between Subjects Effect: (Effect of Menopausal Status)	41.833	1	41.833	10.225	p<0.01
Self-distraction					
Within Subjects Effect:					
Couples with Breast Cancer (Groups)	12.413	1	12.413	3.633	ns
Groups x Menopausal Status	0.413	1	0.413	0.121	ns
Self-distraction (Time)	95.602	1.631	58.627	30.025	p<0.001
Time x Menopausal Status	7.394	2	3.697	2.322	ns
Groups x Time	21.404	1.852	11.555	9.513	p<0.001
Groups x Time x Menopausal Status	5.556	2	2.778	2.469	ns
Between Subjects Effect: (Effect of Menopausal Status)	65.625	1	65.625	13.671	p<0.001
Denial					
Within Subjects Effect:					
Couples with Breast Cancer (Groups)	460.392	1	460.392	145.419	p<0.001
Groups x Menopausal Status	7.762	1	7.762	2.452	ns
Denial (Time)	265.429	1.153	230.217	339.603	p<0.001
Time x Menopausal Status	0.012	2	0.006	0.016	ns
Groups x Time	277.826	1.148	241.981	350.287	p<0.001
Groups x Time x Menopausal Status	0.372	2	0.186	0.469	ns
Between Subjects Effect: (Effect of Menopausal Status)	116.297	1	116.297	20.763	p<0.001
Venting					
Within Subjects Effect:					
Couples with Breast Cancer (Groups)	219.175	1	219.175	50.276	p<0.001
Groups x Menopausal Status	2.124	1	2.214	0.487	ns

Table 3 (c), Continued.

	ss	df	ms	f	sign
Venting (Time)	199.434	2	99.717	187.106	p<0.001
Time x Menopausal Status	1.804	2	0.902	1.693	ns
Groups x Time	224.198	2	112.099	195.420	p<0.001
Groups x Time x Menopausal Status	1.290	2	0.645	1.125	ns
Between Subjects Effect: (Effect of Menopausal Status)	85.556	1	85.556	13.721	p<0.001
Behavioral Disengagement					
Within Subjects Effect:					
Couples with Breast Cancer (Groups)	337.167	1	337.167	135.248	p<0.001
Groups x Menopausal Status	4.667	1	4.667	1.872	ns
Behavioral Disengagement (Time)	0.089	1.089	0.081	0.200	ns
Time x Menopausal Status	0.144	2	0.072	0.325	ns
Groups x Time	0.224	1.087	0.206	0.493	ns
Groups x Time x Menopausal Status	0.057	2	0.028	0.125	ns
Between Subjects Effect: (Effect of Menopausal Status)	2.969	1	2.969	0.950	ns
Self-blame					
Within Subjects Effect:					
Couples with Breast Cancer (Groups)	168.111	1	168.111	57.947	p<0.001
Groups x Menopausal Status	8.620	1	8.620	2.971	ns
Self-blaming (Time)	0.531	1.643	0.323	5.183	p<0.01
Time x Menopausal Status	0.198	2	2	0.099	ns
Groups x Time	1.098	1.673	0.656	11.034	p<0.001
Groups x Time x Menopausal Status	0.061	2	0.30	0.609	ns
Between Subjects Effect: (Effect of Menopausal Status)	25.798	1	25.798	6.064	p<0.05
Problem-focused Strategy					
Within Subjects Effect:					
Couples with Breast Cancer (Groups)	553.317	1	553.317	31.211	p<0.001
Groups x Menopausal Status	5.761	1	5.761	0.325	ns
Problem-focused Strategy (Time)	92.168	1.880	49.030	5.210	p<0.01
Time x Menopausal Status	17.488	2	8.744	0.988	ns
Groups x Time	72.338	1.807	40.031	6.068	p<0.01
Groups x Time x Menopausal Status	8.491	2	4.245	0.712	ns
Between Subjects Effect: (Effect of Menopausal Status)	811.947	1	811.947	25.112	p<0.001
Emotion-focused Strategy					
Within Subjects Effect:					
Couples with Breast Cancer (Groups)	3948.332	1	3948.332	204.088	p<0.001
Groups x Menopausal Status	55.494	1	55.494	2.8682	ns
Emotion-focused Strategy (Time)	96.177	2	48.088	3.004	ns
Time x Menopausal Status	1.343	2	0.672	0.042	ns
Groups x Time	516.985	2	258.492	30.891	p<0.001

Table 3 (c), Continued.

	ss	df	ms	f	sign
Groups x Time x Menopausal Status	10.225	2	5.113	0.611	ns
Between Subjects Effect: (Effect of Menopausal Status)	905.873	1	905.873	19.919	p<0.001

Note: The domain of Humor, Religion and Substance Use for brief COPE were excluded from the analysis as the assumptions for parametric test were unmet.

Table 3 (d): Three Factors Mixed Repeated Measure ANOVA: The Effect of Ethnicity on the Coping Strategies of Couples with Breast Cancer.

Source of Variation	ss	df	ms	f	sign
Active Coping					
Within Subjects Effect:					
Couples with Breast Cancer (Groups)	262.071	1	262.071	160.948	p<0.001
Groups x Ethnicity	3.792	2	1.896	1.164	ns
Active Coping (Time)	374.541	2	187.270	103.084	p<0.001
Time x Ethnicity	7.113	4	1.778	0.979	ns
Groups x Time	60.789	1.971	30.840	32.383	p<0.001
Groups x Time x Ethnicity	3.155	4	0.789	0.840	ns
Between Subjects Effect: (Effect of Ethnicity)	60.861	2	30.431	6.911	p<0.01
Planning					
Within Subjects Effect:					
Couples with Breast Cancer (Groups)	129.580	1	129.580	36.161	p<0.001
Groups x Ethnicity	3.332	2	1.666	0.465	ns
Planning (Time)	94.331	1.104	85.419	69.319	p<0.001
Time x Ethnicity	0.860	4	0.215	0.316	ns
Groups x Time	28.955	1.116	25.940	20.630	p<0.001
Groups x Time x Ethnicity	0.552	4	0.138	0.197	ns
Between Subjects Effect: (Effect of Ethnicity)	91.867	2	45.934	7.098	p<0.01
Positive Reframing					
Within Subjects Effect:					
Couples with Breast Cancer (Groups)	37.412	1	37.412	11.010	p<0.01
Groups x Ethnicity	3.539	2	1.769	0.521	ns
Positive Reframing (Time)	117.264	1.745	67.193	43.096	p<0.001
Time x Ethnicity	4.671	4	1.168	0.858	ns
Groups x Time	26.302	1.806	14.563	10.037	p<0.001
Groups x Time x Ethnicity	1.544	4	0.386	0.295	ns
Between Subjects Effect: (Effect of Ethnicity)	96.195	2	48.098	12.624	p<0.001
Acceptance					
Within Subjects Effect:					
Couples with Breast Cancer (Groups)	11.788	1	11.788	6.902	p<0.01
Groups x Ethnicity	7.100	2	3.550	2.079	ns
Acceptance (Time)	24.278	1.571	15.452	7.395	p<0.01
Time x Ethnicity	35.870	4	8.968	5.463	p<0.001
Groups x Time	39.319	1.961	20.050	18.269	p<0.001
Groups x Time x Ethnicity	6.894	4	1.723	1.602	ns
Between Subjects Effect: (Effect of Ethnicity)	89.514	2	44.757	9.259	p<0.001
Using Emotional Support					
Within Subjects Effect:					
Couples with Breast Cancer (Groups)	17.175	1	17.175	7.428	p<0.01

Table 3 (d), Continued.

	ss	df	ms	f	sign
Using Emotional Support (Time)	81.503	1.952	41.749	17.614	p<0.001
Time x Ethnicity	2.285	4	0.571	0.247	ns
Groups x Time	16.060	2	8.030	5.121	p<0.01
Groups x Time x Ethnicity	1.315	4	0.329	0.210	ns
Between Subjects Effect: (Effect of Ethnicity)	52.773	2	26.386	6.448	p<0.01
Using Instrumental Support					
Within Subjects Effect:					
Couples with Breast Cancer (Groups)	7.575	1	7.575	2.616	ns
Groups x Ethnicity	4.038	2	2.019	0.697	ns
Using Instrumental Support (Time)	99.578	2	49.789	22.938	p<0.001
Time x Ethnicity	8.544	4	2.136	0.984	ns
Groups x Time	16.505	1.811	9.114	4.892	p<0.05
Groups x Time x Ethnicity	8.451	4	2.113	1.253	ns
Between Subjects Effect: (Effect of Ethnicity)	43.033	2	21.517	5.467	p<0.01
Self-distraction					
Within Subjects Effect:					
Couples with Breast Cancer (Groups)	6.509	1	6.509	2.050	ns
Groups x Ethnicity	38.136	2	19.068	6.006	p<0.01
Self-distraction (Time)	90.408	1.652	54.722	27.741	p<0.001
Time x Ethnicity	2.135	4	0.534	0.328	ns
Groups x Time	19.871	1.875	10.597	8.535	p<0.001
Groups x Time x Ethnicity	3.324	4	0.831	0.714	ns
Between Subjects Effect: (Effect of Ethnicity)	96.408	2	48.204	10.032	p<0.001
Denial					
Within Subjects Effect:					
Couples with Breast Cancer (Groups)	527.162	1	527.162	156.291	p<0.001
Groups x Ethnicity	1.278	2	0.639	0.190	ns
Denial (Time)	256.137	1.151	222.582	339.962	ns
Time x Ethnicity	0.579	4	0.145	0.384	ns
Groups x Time	269.177	1.147	234.663	350.073	p<0.001
Groups x Time x Ethnicity	0.262	4	0.066	0.170	ns
Between Subjects Effect: (Effect of Ethnicity)	42.262	2	21.131	3.479	p<0.05
Venting					
Within Subjects Effect:					
Couples with Breast Cancer (Groups)	233.329	1	233.329	56.318	p<0.001
Groups x Ethnicity	20.966	1	10.483	2.530	ns
Venting (Time)	189.819	2	94.909	167.169	p<0.001
Time x Ethnicity	2.453	4	0.613	1.080	ns
Groups x Time	211.776	2	105.888	174.998	p<0.001
Groups x Time x Ethnicity	2.130	4	0.533	0.880	ns
Between Subjects Effect: (Effect of Ethnicity)	124.134	2	62.067	10.771	p<0.001

Table 3 (d), Continued.

	ss	df	ms	f	sign
Behavioral Disengagement					
Within Subjects Effect:					
Couples with Breast Cancer (Groups)	369.694	1	369.694	145.525	p<0.001
Groups x Ethnicity	2.481	2	1.240	0.488	ns
Behavioral Disengagement (Time)	0.057	1.095	0.052	0.137	ns
Time x Ethnicity	1.288	4	0.322	1.550	ns
Groups x Time	0.176	1.091	0.161	0.415	ns
Groups x Time x Ethnicity	1.150	4	0.287	1.355	ns
Between Subjects Effect: (Effect of Ethnicity)	20.760	2	10.380	3.533	p<0.05
Self-blame					
Within Subjects Effect:					
Couples with Breast Cancer (Groups)	174.456	1	174.456	59.369	p<0.001
Groups x Ethnicity	11.355	2	5.677	1.932	ns
Self-blaming (Time)	0.536	1.613	0.332	5.255	p<0.01
Time x Ethnicity	0.284	4	0.071	1.394	ns
Groups x Time	1.417	1.663	0.852	14.787	p<0.001
Groups x Time x Ethnicity	0.657	4	0.164	3.427	p<0.01
Between Subjects Effect: (Effect of Ethnicity)	10.197	2	5.099	1.189	ns
Problem-focused Strategies					
Within Subjects Effect:					
Couples with Breast Cancer (Groups)	1229.056	1	1229.056	81.392	p<0.001
Groups x Ethnicity	0.318	2	0.159	0.011	ns
Problem-focused Strategy (Time)	5867.815	1.751	3350.475	247.483	p<0.001
Time x Ethnicity	188.420	4	47.105	3.973	ns
Groups x Time	5639.056	1.696	3324.520	416.808	p<0.001
Groups x Time x Ethnicity	42.755	4	10.689	1.580	ns
Between Subjects Effect: (Effect of Ethnicity)	860.692	2	430.346	13.120	p<0.001
Emotion-focused Strategies					
Within Subjects Effect:					
Couples with Breast Cancer (Groups)	13640.367	1	13640.367	601.413	p<0.001
Groups x Ethnicity	34.823	2	17.411	0.768	ns
Emotion-focused Strategy (Time)	5918.556	2	2959.278	212.383	p<0.001
Time x Ethnicity	41.312	4	10.328	0.741	ns
Groups x Time	4028.312	2	2014.156	241.177	ns
Groups x Time x Ethnicity	122.147	4	30.537	3.657	ns
Between Subjects Effect: (Effect of Ethnicity)	1736.283	2	868.142	25.312	p<0.001

Note: The domains of Humor, Religion and Substance Use for brief COPE were excluded from the analysis as the assumptions for parametric test were unmet.

<i>IDENTIFICATION NUMBER</i>				
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**HUSBAND'S SUPPORT AND COUPLE'S WELL-BEING AFTER
BREAST CANCER SURGERY
Patient's and Spouse's Information and Consent Form**

Introduction

You are invited to take part in this study where it is estimated that 250 breast cancer patients will be participating. This research is carried out by the University of Malaya Medical Centre, Kuala Lumpur, Malaysia in conjunction with the Hospital Universiti Kebangsaan Malaysia (HUKM), the Kuala Lumpur General Hospital (KLGH) and other government hospitals.

Breast cancer is the third most common cancer worldwide and is the most common cancer among women. Since 1991, breast cancer has been the second leading cause of cancer admissions in Hospitals. According to the Malaysian National Cancer Registry in 1996, the breast cancer incidence in Malaysia was estimated of 3500 cases annually and was seen to affect mainly women between the ages of 40 and 64 years old.

The Purpose of the Research

The general aim of this research is to examine the psychosocial impact following breast cancer surgery and its treatment (i.e. chemotherapy) on patients and their spouses. The specific aims are as follows:

1. To examine the impact of breast cancer surgery and chemotherapy treatment on patients' well-being.
2. To investigate the husbands' support and other interpersonal relationship aspects following breast cancer surgery and along the course of chemotherapy treatment
3. To assess the effect of medical and bio/socio-demographic on breast cancer patients' psychosocial morbidity following breast cancer surgery and the chemotherapy treatment.
4. To observe the coping strategies used by breast cancer patients and their husbands in facing the treatment of breast cancer.

The Procedures

You and your spouses will be given a set of questionnaires which consists the evaluation of quality of life, interpersonal relationship and coping strategies. Your medical and bio/socio-demographic information are also needed. The questionnaire is self-administrated however, in certain situation (e.g. eye problem, illiteracy), assistance can be provided. The questionnaire will be given to you at 3 phases: prior-to, during and post adjuvant of chemotherapy.

Participant's Responsibilities

The participant needs to contact the researcher if there be any changes in appointment with researcher, contact information or appointment for the treatment in Hospital.

Benefits and Risk

What will the benefits of the study be:

(a) to you and your spouse as the participant?

Your participation in this study will provide an understanding of your quality of life following breast cancer surgery and treatment of adjuvant chemotherapy.

(b) to the researchers?

We hope that this study will provide the baseline data for the health organizations to develop an intervention program and also useful for them in term of management of breast cancer patients.

(c) What are the possible drawbacks?

Participation in this study involves **NO** potential risks. However, in the course of this study, if there is a need for further support, we will provide or refer you to the relevant organizations.

Confidentiality

Your identity and personal particulars in this study will be kept strictly confidential and to the extent permitted by the laws and accessible only to the researchers in this research study. Data may be reported in scientific journals and will not include any information that identifies you.

Compensation

Participant's time and effort spent in this study are appreciated. A small token will be given.

Voluntary Participation

Participation in this research is entirely voluntary. Your refusal to participate in this research study will not result in any penalty or loss of any benefits. You and your spouse can stop participation at any point without losing any of your rights for proper medical treatment. If you and your spouse want to participate in this study please sign the attached consent form in duplicate and please provide the information requested. You and your spouse will be given a copy of the Informed Consent Form to keep after the researcher has signed the form as well.

Researchers' Contact Information

Please read the following information carefully and do not hesitate to discuss any questions you and your spouse may have with the researchers. You can also call us during working hours at the telephone numbers as below:

Mohd Nasir B Che Mohd Yusoff (PhD candidate)

*Health Research Development Unit (HeRDU),
Faculty of Medicine, Universiti of Malaya, Kuala Lumpur
Contact Number: 013-9447885/03-79674973*

Professor Dr. Sarinah Low Abdullah/ Low Wah Yun

*Health Research Development Unit (HeRDU),
Faculty of Medicine, Universiti of Malaya, Kuala Lumpur*

Contact Number: 03-79675729/39

Professor Dr. Yip Cheng Har

Department of Surgery, Faculty of Medicine, University of Malaya, Kuala Lumpur

Contact Number: 03-79502149

Professor Madya Dr. Fuad Ismail

Department of Radioterapy & Oncology,

Faculty of Medicine, National University of Malaysia,

Contact Number: 03-91731878

Should you need any other information, please feel free to contact the research /members or the Ethics Committee Secretariat of the University of Malaya Medical Centre, Kuala Lumpur, Malaysia at 03-79502565.

Signatures

To participate in study, you must sign and date the signature page as attached.

APPENDICES

A: Ethical Approval

B: Informed Consent

D: Three Factors Mixed Repeated Measure ANOVA

E: Related Documents

IDENTIFICATION NUMBER				
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**HUSBAND’S SUPPORT AND COUPLE’S WELL-BEING AFTER BREAST
CANCER SURGERY**

Signature Page (Husband)

To participate in this study, you or your legal representative must sign this page.

By signing this page, I am confirming the following:

- ❖ I have read all of the information in this Patient Information and Consent Form including any information regarding the risk in this study and I have had time to think about it.
- ❖ All of my questions have been answered to my satisfaction.
- ❖ I voluntarily agree to participate in this research study, to follow the study procedures, and to provide necessary information to the researchers, as requested.
- ❖ I may freely choose to stop participating in this study at anytime.
- ❖ I have received a copy of this Patient Information and Consent Form to keep for myself.
- ❖ My participation does not interfere with my wife’s treatment.

Participant

Name:(please print)

I/C No.:.....

SignatureDate:.....

Researcher

Name:(please print)

I/C No.:.....

SignatureDate:.....

Witness

Name:(please print)

I/C No.:.....

SignatureDate:.....

IDENTIFICATION NUMBER				
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**HUSBAND’S SUPPORT AND COUPLE’S WELL-BEING
AFTER BREAST CANCER SURGERY**

Signature Page (Patient)

To participate in this study, you or your legal representative must sign this page.

By signing this page, I am confirming the following:

- ❖ I have read all of the information in this Patient Information and Consent Form including any information regarding the risk in this study and I have had time to think about it.
- ❖ All of my questions have been answered to my satisfaction.
- ❖ I voluntarily agree to participate in this research study, to follow the study procedures, and to provide necessary information to the researchers, as requested.
- ❖ I may freely choose to stop participating in this study at anytime.
- ❖ I have received a copy of this Patient Information and Consent Form to keep for myself.
- ❖ My participation does not interfere with my treatment.

Participant

Name:(please print)

I/C No.:.....

SignatureDate:.....

Researcher

Name:(please print)

I/C No.:.....

SignatureDate:.....

Witness

Name:(please print)

I/C No.:.....

SignatureDate:.....