

Supplementary Material

Supplementary Material 1. Search strategy for each database

MEDLINE (Pubmed)	("Mastectomy"[Mesh] OR Mastectom*[tw] OR Mammectom*[tw]) AND ("Social Support"[Mesh] OR ((social[tw] OR emotional[tw] OR psychological[tw] OR famil*[tw] OR online[tw]) AND (support*[tw] OR network*[tw] OR care[tw])) OR peer[tw]) AND ("Quality of Life"[Mesh] OR "Quality of Life"[tw] OR "Life Quality"[tw] OR HRQOL[tw])
CENTRAL	([mh Mastectomy] OR Mastectom*:ti,ab,kw OR Mammectom*:ti,ab,kw) AND ([mh "Social Support"] OR ((social:ti,ab,kw OR emotional:ti,ab,kw OR psychological:ti,ab,kw OR famil*:ti,ab,kw OR online:ti,ab,kw) AND (support*:ti,ab,kw OR network*:ti,ab,kw OR care:ti,ab,kw)) OR peer:ti,ab,kw) AND ([mh "Quality of Life"] OR "Quality of Life":ti,ab,kw OR "Life Quality":ti,ab,kw OR HRQOL:ti,ab,kw)
Embase	('Mastectomy'/exp OR Mastectom*:ti,ab,de,tn OR Mammectom*:ti,ab,de,tn) AND ('Social Support'/exp OR ((social:ti,ab,de,tn OR emotional:ti,ab,de,tn OR psychological:ti,ab,de,tn OR famil*:ti,ab,de,tn OR online:ti,ab,de,tn) AND (support*:ti,ab,de,tn OR network*:ti,ab,de,tn OR care:ti,ab,de,tn)) OR peer:ti,ab,de,tn) AND ('Quality of Life'/exp OR "Quality of Life":ti,ab,de,tn OR "Life Quality":ti,ab,de,tn OR HRQOL:ti,ab,de,tn)
Web of science	(ALL=Mastectomy OR ALL=Mastectom* OR ALL=Mammectom*) AND (ALL="Social Support" OR ((ALL=social OR ALL=emotional OR ALL=psychological OR ALL=famil* OR ALL=online) AND (ALL=support* OR ALL=network* OR ALL=care)) OR ALL=peer) AND (ALL="Quality of Life" OR ALL="Quality of Life" OR ALL="Life Quality" OR ALL=HRQOL)
Scopus	(INDEXTERMS("Mastectomy") OR TITLE-ABS-KEY("Mastectom*") OR TITLE-ABS-KEY("Mammectom*")) AND (INDEXTERMS("Social Support") OR ((TITLE-ABS-KEY("social") OR TITLE-ABS-KEY("emotional") OR TITLE-ABS-KEY("psychological") OR TITLE-ABS-KEY("famil*") OR TITLE-ABS-KEY("online")) AND (TITLE-ABS-KEY("support*") OR TITLE-ABS-KEY("network*") OR TITLE-ABS-KEY("care")))) OR TITLE-ABS-KEY("peer")) AND (INDEXTERMS("Quality of Life") OR TITLE-ABS-KEY("Quality of Life") OR TITLE-ABS-KEY("Life Quality") OR TITLE-ABS-KEY("HRQOL"))

Supplementary Material 2. Table Quality of Life Outcomes (All Domains)

Study	QoL Domain	Intervention Group Mean (SD)	Control Group Mean (SD)	SMD / p-value
Xu, 2021	Total QoL	69.11±9.48 → 84.39±8.54	67.00±8.62 → 72.11±8.85	1.41 (1.02–1.8), p<0.001
	Physiological	14.60±4.13 → 18.15±3.41	14.31±2.91 → 15.98±3.37	0.64 (0.28–1.0), p<0.001
	Social	15.76±3.06 → 22.47±3.81	15.52±3.46 → 17.36±1.98	1.68 (1.28–2.09), p<0.001
	Emotional	9.77±2.20 → 14.82±2.11	9.51±2.34 → 10.03±1.95	2.35 (1.9–2.81), p<0.001
	Functional	10.97±3.46 → 18.30±4.31	9.91±3.26 → 11.07±3.36	1.87 (1.45–2.29), p<0.001
	Additional attention	18.02±3.33 → 19.46±2.84	17.72±2.76 → 19.32±3.36	0.05 (–0.3– 0.39), p=0.8
Tang, 2021	Physiological	10.13±2.47 → 19.31±4.12	10.29±2.21 → 15.24±3.74	p<0.001
	Social	9.88±1.29 → 19.34±1.82	10.01±1.12 → 14.01±2.22	p<0.001
	Emotional	6.75±1.23 → 14.84±2.01	5.17±1.15 → 9.67±2.00	p<0.001
	Functional	5.14±1.15 → 13.31±2.08	6.77±1.31 → 10.77±1.47	p<0.001
	Additional attention	10.11±1.02 → 24.19±2.83	10.2±1.09 → 16.67±2.18	p<0.001
Sharif, 2010	Global Health Status	63.09±22.69 → 80.0±17.9	62.16±22.02 → 61.66±21.88	p=0.001
	Physical functioning	79.72±18.55 → 80.81±16.02	83.26±13.41 → 82.27±13.32	p=0.041
	Role functioning	85.37±21.95 → 98.63±5.72	86.80±19.73 → 85.06±20.69	p=0.001
	Cognitive functioning	72.78±23.24 → 97.75±5.52	70.74±23.20 → 69.38±24.13	p=0.001
	Emotional functioning	63.94±29.23 → 97.10±4.97	61.90±25.45 → 60.20±24.73	p=0.001

	Social functioning	81.97±18.89 → 99.65±2.38	81.97±20.92 → 78.57±22.30	p=0.001
Liu, 2024	Total QoL	71.58±9.39 → 76.27±10.29 (n=62)	69.81±9.57 → 71.52±11.53 (n=62)	not reported
Hosseini, 2016	Total QoL	15.81±1.75 → 18.52±1.36 (n=15)	15.62±1.66 → 15.25±2.23 (n=14)	p=0.001
	Health and function scale	15.07±2.12 → 18.42±1.09	14.04±1.92 → 15.02±4.46	p=0.014
	Socio-economical scale	15.45±2.4 → 17.79±2.41	15.35±1.99 → 14.52±2.50	p=0.001
	Psychological-spiritual scale	15±2.34 → 19.04±1.86	16±1.96 → 14.31±1.93	p=0.001
	Family	18.98±3.38 → 19.72±1.87	19.71±2.23 → 18.26±1.94	p=0.051
Jelvehzadeh, 2022	Total QoL	4.71±1.07 → 6.05±1.0	3.94±1.06 → 4.65±0.8	p=0.03
	Physical	3.15±1.52 → 5.64±1.73	3.21±2.08 → 3.70±1.68	p=0.02
	Psychological	3.75±1.78 → 5.80±1.15	3.41±1.68 → 4.32±1.01	p<0.001
	Existential	5.05±0.56 → 6.48±1.08	4.05±1.04 → 4.26±0.93	p<0.001
	Supportive	4.96±2.32 → 6.10±1.61	5.20±1.15 → 5.55±1.44	p=0.156
Hamed Bieyabanie, 2021	Total QoL	59.4±23.6 → 74.5±22.3	66.5±19.2 → 59.8±25.9	p=0.029
	Physical	76.4±13.6 → 80.7±14.2	75.3±11.7 → 76.7±11.7	p=0.254
	Emotional	60.4±28.2 → 74.7±23.0	57.3±29.3 → 61.7±28.6	p=0.047
	Social	71.6±24.8 → 81.8±23.5	71.1±24.9 → 69.5±28.4	p=0.069

	Role	83.9±20.3 → 87.8±19.4	82.1±17.5 → 80.0±20.2	p=0.071
	Cognitive	72.9±27.2 → 80.1±18.4	71.1±29.0 → 36.1±31.9	p=0.010
Hao, 2024	Physiological	51.08±2.18 → 96.35±3.28	51.72±3.30 → 68.75±4.05	p<0.0001
	Affective	52.94±2.05 → 98.08±4.60	53.08±2.29 → 71.30±4.05	p<0.0001
	Functional	51.06±4.50 → 98.60±4.95	49.70±3.00 → 68.90±3.20	p<0.0001
	Social	54.70±2.59 → 98.70±4.85	54.55±2.50 → 68.95±4.55	p<0.0001
	Total QoL	90.96±4.84 → 104.21±5.32	88.04±6.96 → 65.14±5.00	p=0.001
Pirzadi, 2023	Physical	27.11±3.54 (after)	19.00±3.41 (after)	p=0.001
	Psychological	23.46±2.06 (after)	15.21±1.85 (after)	p=0.001
	Social	13.79±1.54 (after)	9.07±2.56 (after)	p=0.001
	Environment	32.14±2.33 (after)	17.61±3.03 (after)	p=0.001
	General health	7.71±0.85 (after)	4.25±1.04 (after)	p=0.001
Wojtyna, 2007	General functioning	57.58 → 64.76	57.29 → 54.86	<0.05
	Physical	67.24 → 63.64	64.79 → 61.88	>0.05
	Symptoms	38.73 → 35.56	42.01 → 50.26	<0.001
	Health status	50 → 48.96	55.71 → 47.14	<0.01
	Emotional	45.95 → 55.24	48.43 → 46.61	<0.05
	Cognitive	58.1 → 72.38	54.17 → 51.56	<0.001
	Total QoL	82.8±13.3 → 86.5±14.5	85.7±14.3 → 88.0±14.2	>0.01

Koinberg, 2006	Physical Well-Being	21.6±3.8 → 23.4±4.1	23.1±4.1 → 24.0±4.3	<0.01
	Functional Well-Being	18.9±5.4 → 21.1±5.0	19.9±5.6 → 21.7±5.3	<0.01
	Social/Family Well-Being	23.7±5.1 → 22.8±4.8	24.4±4.1 → 22.5±6.1	>0.01
	Emotional Well-Being	18.6±4.3 → 19.3±4.3	18.8±4.9 → 19.7±4.0	>0.01
Husic, 2009	Total QoL	0.35±0.1 → 0.59±0.11	0.39 → 0.34±0.36	p=0.0001
Sun & Chen, 2024	Total QoL	42.84±6.29 → 49.32±5.08	42.15±6.71 → 45.09±5.24	<0.001
Huang, 2019	Physical function (3 months)	75.21	74.81	p>0.05
	Cognitive function (3 months)	84.62	70.33	p<0.01
	Social activity (3 months)	88.43	65.94	p<0.01
	Emotional function (3 months)	87.54	62.53	not reported
	Pain situation (3 months)	82.54	81.57	not reported
	Couple life (3 months)	86.18	67.59	p<0.05
Liang, 2025	Biological domain	18.98±2.89 → 23.17±4.43	18.48±3.39 → 20.1±3.27	not reported
	Family and social domain	13.85±2.88 → 19.13±4.85	13.21±3.05 → 14.73±3.4	not reported
	Emotional domain	15.4±2.54 → 19.54±3.43	15.1±2.97 → 16.48±2.59	not reported
	Functional domain	9.4±1.33 → 17.54±2.61	8.88±1.61 → 11.94±3.26	not reported

	Additional attention domain	21.79±3.06 → 27.29±3.25	21.17±3.4 → 24.6±3.17	not reported
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Note: Values are expressed as Mean ± SD when available. Arrows (→) indicate change from baseline to follow-up. Timepoints shown as reported by each study.

* Standardized mean difference calculated by the research team based on the sample size, using Cohen's d for n > 30 or Hedges' g for n < 30