Supplementary Table 1: included studies: Quantitative studies

Reference/ Authors Country	**Design**	**Aims**	**Study population**	**Measures**	**Outcome Measures (Psychological health)**	**Results Summary**
PARMAR et al (2005)[12] India	Prospective Cohort	To assess the validity of EORTC QLQ C30 and BR 23 in Indian breast cancer patients	**N** = 193 **Women** = 100% **Language**: English, Gujarati Marathi and Hindi **Age**: 44.2 years (range 24–72 years) **Level of education** Primary:101 Secondary:31 Graduation:42 Postgraduation:19 **Religion: N/A** **Socio economic status: N/A** **Occupation**: Housewife:135 Service:51 Professional/Others:7 **Marital status** Unmarried:8 Married :174 Divorcee/Widow:11 **Number of children** **Primary cancer**: breast **Treatment**: MRM :39.9 % BCT: 60.1 % adjuvant chemotherapy 90%, hormone therapy 51% radiotherapy 75% **Stage of disease** **Duration**: October 1998 to September 2001	(EORTCQLQ-C30); BR 23	Primary: Validity and reliability of questionnaire Secondary: body image, global QoL	BCT maintained a better body image through visit 1 (p<0.001) and visit 2 (p=0.055) compared with women who underwent mastectomy. Chemotherapy significantly affected the global QoL with poor scores during treatment

Kaur et al (2014)[13] India	Descriptive cross-sectional study	Investigate the QOL in patients of breast cancer beyond the 1st year of their treatment and to identify their specific information and rehabilitation needs. Patients were divided into 3 groups according to duration of follow up.	**N** = 154 **Women** = 100% **Language**: English **Age:** Group 1(1-2 years): 47.4±8.8 Group 2(2-5 years): 43.3±10.3 Group 3(>5 years): 59.1±9.37 **Level of education** illiterate :102 Can read and write :52 **Religion** Hindu :126 Muslim :18 Sikh :4 Christian :5 **Socio economic** Low :114 Middle :38 High :1 **Occupation:** Unemployed :141 Employed :13 **Marital status** Single :0 Married :141 Widowed :13 **Number of children : N/A** **Primary cancer**: breast Stage I-20%, Stage II-49%, Stage III-30.5% **Treatment**: MRM :142 Chemotherapy:147 RT:34 Hormone:150 BCT:10 **Duration**: March 2009 to March	(FACT-B) version 4	Physical well-being (PWB), Social well-being (SWB), Functional well-being (FWB) and Emotional well-being (EWB). The fifth subscale contains 9 items and is specific for breast cancer (BCS).	FACT-B score: Group III (89.83 ± 12.80) > Group II (85.75 ± 20.15) > Group I (79.06 ± 14.60): better QOL for patients >5 years follow-up Group II best social, emotional and FWB but their breast specific QoL was worse than other groups. Group III patients best PWB score Breast specific subscale was poorest in Group II patients (Group II vs. Group III, p = 0.039) Patient's age, marital status, education, employment, social class, clinical stage and recurrent disease had a significant impact on patient's QOL Almost 100% patients wanted more information about their disease, their chance of cure and life expectancy, possibility of disease affecting other family members, the duration of treatment, the expense, 56% were bothered by shoulder/arm-pain and shoulder, lack of energy, limb swelling. Restriction in sexual relationship was reported by 37% patients, 36% wanted counselling and risk assessment of their family members to allay their fears.

			2010			
Shah etal (2010)[14] India	Cross-sectional study	To assess the QoL of patients of carcinoma breast and to ascertain pitfalls and make suitable correction for future studies on Indian patients	**N** = 250 Enrolment at diagnosis (N=46) completion of Treatment (N=83) undergoing treatment(N=121) **Women** = 100% Language: N/A **Age** 48.2 years (26–92 years) 40–55:51% 55–70 :26% 25–40 :29 over 70 years :27 **Level of education** illiterate :42% graduates :26 **Occupation**: housewives :82% Rest employed: teaching **Religion** **Socio economic** **Marital status** Married:250 **Number of children**:2-3 0: 1 Variables: age, education, co morbidity, stage of disease, treatment and radiotherapy. **Primary cancer**: breast Treatment: N/A Duration: N/A	QoL four-part questionnaire: Part 1 and 2 = Physical in capacitance Part 3 and 4 = Emotional and psychological impairment	Part 3 & 4 used parameters like dependency, invalid, restriction on chores, problems with chores, feelings, sadness and inner tension.	QoL results seen as per group of patients: a. Good QoL: 43% b. Excellent QoL: 12.8% c. Moderately compromised QoL: 30.6% d. Severely compromised QoL: 8% e. Poor QoL: 5.6% The illiterate group (105 patients) reported better QoL in all walks of life
Pandey etal (2005)[15] India	Cross sectional	To identify the determinants of QOL of Indian women	**N** = 504 **Women** = 100% **Language**: Malayalam **Age:** 47.6 years (20–80) **Level of education**	(FACT-B)	Physical, social/family well-being, functional and emotional well-being, the fifth subscale contain 9	Physical well-being 19.8± 4.7; social family well-being 19.9 ± 5.3; Emotional well-being 14 ± 14.9 and functional well-being 13 ± 5.7.

		with breast cancer treated with curative intent.	Illiterate:23 ≤5 :96 6–10:255 11–12 :55 Graduate/tech: 40 Post graduate :29 **Religion** Hindu:323 Muslim :71 Christian :94 Others/Don't know:13 **Socio economic** Low: 167 Middle:164 High:171 **Occupation**: HW/Unemployed :380 Employed:81 Self/Business/Daily:31 Don't know:10 **Marital status**: Single :23 Married:377 Widow/Divorce:100 **Number of children** Variables: age, education, co morbidity, stage of disease, treatment and radiotherapy. **Primary cancer**: breast T1 (6.6%) T2 disease (34.7%) T3 (16%) and T4 (15%) Tx (27.7%) **Treatment:** No treatment (43.4%),Excision (16.7%) MRM (21.9%) BCT (0.4%) Don't		items and is specific for breast cancer	The mean scores for breast subscale was 23.0 Univariate analysis. Younger women (<45 years), women having unmarried children, nodal and/or metastatic disease, and those currently undergoing active treatment showed significantly poorer QOL scores in the univariate analysis. Multivariate analysis Religion, stage, pain, spouse education, nodal status, and distance travelled to reach the treatment centre as indicative of patient QOL.

			know (17.6%) **Duration:** N/A			
Mahapatro etal (2005)[16] India	cross-sectional study	To explore the various concerns, coping mechanisms and body image disturbances and extent of resolution of concerns as well as to study the level of anxiety and depression in mastectomized and lumpectomized patients.	**N** = 75 **Women** = 100% **Language**: English **Age**: Mastectomy 42±7.14 and lumpectomy 42.74±6.23 years, **Level of education** higher than secondary level of education: 100% **Religion: N/A** **Socio economic**: middle majority **Occupation**: housewives :majority Rest: clerical to legal jobs. **Family**: Nuclear **Marital status:** Married majority **Number of children:N/A** **Primary cancer**: breast **Treatment**: Lumpectomy(n=25) Mastectomy (*n*=50) **Duration**: 1 year	Concern and Coping Checklist by Devlen Hospital Anxiety and Depression Scale	Concerns and coping mechanism Severity of anxiety and depression.	Sexual role and performance concern showed a statistically significant difference ($p<0.05$) between the lumpectomized and mastectomized groups. The mean (SD) values were 1.12±0.44 and 1.38±0.56, respectively. Resolution in concerns was also seen only in sexual role and performance concern where resolution in the mastectomized group was to a lesser extent than the lumpectomized group ($p<0.01$; statistically significant). The mean (SD) was 3.82+1.68 and 4.76+0.83, respectively. No statistically significant difference between the two groups for hospital anxiety and depression scores.
Carlson etal (2013)[17] Canada	Cross sectional Survey	Further explore and confirm findings from the qualitative phase by gaining deeper insight into a larger and more diverse group of south Asian women. Better	**N** = 64 **Women** = 100% **Language**: English, Punjabi **Age** :<44 Years :6 45–54 Years:19 55–64 Years :21 >65 Years :18 **Level of education** <High school:13 High school:24 Certificate/diploma:10	Survey developed and validated with white breast cancer survivors at the BCCA Vancouver Island Cancer Centre questionnaire consisted of 27 questions	Impact of breast cancer treatment, overall patient satisfaction with follow-up care, information needs at discharge and completion of treatment, and demographic information	95.4% had visited their family doctor within several months (0.5–24 months) after discharge. Main physical effects of concern were fatigue and anxiety concerning health was the main psychosocial impact. Younger age was more concerned about physical appearance, depression, and the impact of cancer on family members while older groups were concerned about family

		understand the content and format preferences of those women for a survivorship care plan.	Bachelor degree :9 >Bachelor degree 8 Not specified 3 **Religion:** N/A **Socio economic: N/A** **Marital status** Married :42 Never married :4 Widowed:12 Divorced/separated :3 Not specified :3 **Work status** Employed :16 Self-employed:6 Homemaker:8 Unemployed:4 Retired:20 Unable to work:8 Not specified :2 **Number of children**: N/A **Family**: N/A **Primary cancer**: breast **Treatment**: chemotherapy 31 (48.4%) hormone therapy 48 (75%) radiotherapy 45 (70.3%) **Duration**: 3 and 60 months post treatment Survey once, reminder in one month.			obligations and work issues. 14.1% described strain on their marriage and on their relationships with family and friends as significant issues. With regards to survivorship care plan most common “very useful” elements were a summary of diagnosis and treatment, and nutrition and supplement information.
Purkayastha etal (2017)[18] India	Cross-sectional Study	To study the prevalence of depression among breast cancer patients undergoing treatment and	**N** = 270 **Women** = 267 **Men**= 3 **Language**: Malayalam **Age** 18-30: 5 31-40:24	Patient Health Questionnaire (PHQ-9) WHOQOL-BREF for quality of life	Screen for depression four domains of QOL physical, psychological, social relationship, and environmental.	Of the 270 patients, 21.5% had depression with 22% had moderately severe to severe depression. Patients with depression experienced overall a poor QOL. 22 patients reported their overall QOL was

		to correlate its association with their QOL	41-50: 83 51-60: 91 61-70: 52 71-80:15 **Level of education** Below graduation:120 Graduation and above:150 **Occupation**: Employed:105 Unemployed:165 **Religion** **Socio economic** **Marital status** Married:233 Single:5 Widowed:25 Divorced or separated:7 **Family**: Nuclear :158 Joint :9 Other:103 **Number of children** **Primary cancer**: breast **Treatment**: Not reported **Duration**: August 2014 to August 2016			"poor" and 34 patients reported to be dissatisfied with their health. There was an association between depression and domains of QOL. Patients with depression had lower scores in all domains when compared to those without depression
Dubashi etal (2010)[19] India	Cross-sectional Study	To describe the QOL among breast cancer women with age less than or equal to 35 years at the time of diagnosis. To determine the contribution of	**N** = 51 **Women** = 100% **Language**: English, Tamil, Telugu, and Malayalam **Primary cancer**: breast **Age** 21 – 25 :7 26 – 30:27 31 – 35 :17 **Level of education** Primary :27	EORTC module QLQ – C30 and the BR 23 Questionnaire.	EORTC: Five multi-item functional subscales: Physical health, role function, emotional function, cognitive function and social function; three multi-item symptom scales measuring fatigue, pain, and emesis; a global health subscale	The effect of breast cancer on the occupation and marital status was minimal. The global health status and the functional scores were high, while the overall sexual function was lower. The global health status ($p = 0.04$) was higher in the mastectomy group.

		sociodemographic, medical, and psychosocial factors on the QOL. To study the impact of breast conservation treatment and mastectomy on the QOL	Secondary :17 Graduate :6 Postgraduate:1 **Religion** **Socio economic** **Occupation**: Housewife :39 Labourers :11 Professionals :1 **Marital status** Married :46 Single :5 **Number of children** **Treatment**: MRM :64.7% BCT: 35.3% adjuvant chemotherapy: 100% hormone therapy 82.4% **Duration**: 1994 to 2005		and six items to assess the financial impact and general symptoms. BR-23 module incorporates three functional scales (body image, future perspectives, and sexuality) and four symptom scales (arm symptoms, breast symptoms, hair loss, and side effects), fear of recurrence and partner response, sexual dysfunction, and menopausal symptoms	The arm symptoms ($p = 0.027$) and pain were higher in the Breast conservation surgery (BCS) group. The sexual symptoms appeared to be higher in the ovary ablated group when compared to the ovary preserved group. The sexual functional scores ($p = 0.02$) and sexual enjoyment scores ($p = 0.003$) were better in the mastectomy group
Tripathi etal (2017)[20] India	cross-sectional study	To assess the perceived stigma and its associations with sociodemographic, affective symptoms, and treatment-related issues in women following surgery for breast cancer.	**N** = 134 **Women** = 100% **Language**: local vernacular language **Primary cancer**: breast **Age**: 52 years (44–60 years.) **Level of education** school education or less:78 college education: 56 **Religion** **Socio economic** **Marital status** Married 99 Single: 35 Number of children **Treatment**: MRM: 72	Hospital Anxiety and Depression Scale (HADS) Body Image After Breast Cancer Questionnaire	Six subscales: stigma, vulnerability, transparency, arm concern, body concern, and limitation subscales	Univariate High levels of stigma were associated with lesser educational attainment, ($p = 0.01$) breast conservation surgery (BCS) vs mastectomy ($p < 0.001$) having an anxiety disorder ($p = 0.03$) and depression ($p < 0.01$) Mulitvariate Stigma as the dependent variable, being less educated ($p = 0.02$) and opting for BCS($p < 0.001$) were associated with higher stigma.

			BCT: 62 adjuvant chemotherapy :32.8% **Duration**: N/A			
Brahmbhatt etal (2012)[21] India	Cohort study	To evaluate psychosocial status of patients who underwent surgery for cancer.	**N** = 29 **Women** = 100% **Language**: English, Gujarati Age Level of education Religion Socio economic Marital status Number of children **Primary cancer**: breast **Treatment**: Not known **Duration:** January 2011 and May 2011	GHQ-28 and HADS	GHQ-28: anxiety/insomnia, depression, somatic symptoms, and social dysfunctions HAD: anxiety and depression	Significant increasing total GHQ-28 score in breast cancer patients who underwent modified radical mastectomy or breast conservative surgery therapy ($p < 0.001$) GHQ-28 sub scores also indicative of greater social dysfunction ($p < 0.001$), anxiety/insomnia ($p < 0.001$), somatic symptoms ($p < 0.01$), and severe depression ($p < 0.001$) Anxiety and depression levels increased significantly ($p < 0.01$) after surgical treatment in breast cancer patients from the HAD scale
Chintamani etal (India)[22] 2011	Cross-sectional study	Aim of assessing the levels of anxiety and depression in breast cancer patients in the Indian scenario and to correlate these levels with response to neoadjuvant chemotherapy	**N** = 84 **Women** = 100% **Language:** English **Age** **Level of education** illiterate (46, 54.7%) **Religion** **Socio economic** **Occupation**: housewives (68, 79.7%) **Marital status** **Family**: joint and nuclear families was equal (50% in each category). **Number of children** **Primary cancer**: breast **Treatment**: Neo adjuvant chemotherapy 100%	Hospital Anxiety and Depression Scale (HADS)	Anxiety Depression	The mean depression scores in the breast cancer patients included in this study was 4.9 (range 1–6). The mean depression score in responders after neoadjuvant chemotherapy was found to be 5.6 (range 1–16), whereas the mean score in non- responders was 10.2 (range 4 – 20). 24 (70.5%) non-responders had depression vs 11 (22.0%) responders 24 (57.1%) patients from nuclear families showed significant levels of depression, vs 11 (36.2%) patients of joint families ($p < 0.05$).

			Responders to neoadjuvant 49 (58.3%) Non-responders: 35 (41.7%) **Duration**: Not given			
Damodar etal (India)[23] 2014	Cohort	To evaluate the QOL and affecting factors on it among south Indian cancer patients	**N** = 41 **Women** = 100% **Language**: English, Telugu **Age** Young adult (19-35):15 Adult (36-50):9 Old adult (51-64):9 Young older (65-74) :8 Old (75-84) :0 **Level of education** **Religion** **Socio economic** **Marital status** **Number of children** **Primary cancer**: breast Treatment: Duration: January and June 2011	EORTC QLQ-C30 EORTC QLQ-BR23	Functional scale: physical function, role function, body image future perspective Symptom scale: Insomnia, breast and arm symptoms	Functional scale: physical function, role function significant Extended functional scale using EORTC QLQ-BR23 questionnaire: future perspective was found to be significant ($p < 0.05$) Symptom scale: fatigue, pain, arm symptoms and upset by hair loss were found to be significant ($p < 0.05$). Global health status when paired with physical function, role function, insomnia, body image, future perspective in functional scale and breast symptoms, arm symptoms in symptoms scale were found to be significant
Singh etal (India)[24] 2015	Case control	Approximate the depression, anxiety, and stress (DAS) levels in homogenous surviving cancer patients receiving chemotherapy as compared to	**N** = 60 **Women** = 100% **Language**: local understandable language Age: Level of education Religion Socio economic Marital status Number of children	Depression Anxiety and Stress scale (DASS-21)	Anxiety Depression Stress	Significant difference was noted in mean stress score in different cancer type with more stress in breast cancer patients Mean score for depression 9.5 (5.8) Anxiety5.1 (4.85) Stress 9.87 (5.30)

		normal control. To correlate the primary objective with different demographical parameter such as age, gender, duration of cancer diagnosis, chemotherapy cycles, cancer types, etc.	**Primary cancer**: breast Treatment: **Duration**: January 2014 to September 2014			

EORTC QLQ C30: European Organization for Research and Treatment of Cancer-Quality of Life Questionnaire-Core 30; **BR23:** Breast cancer specific module; **QOL :**quality of life; **BCT** :Breast conservation treatment; **MRM**: Modified Radical Mastectomy ; **FACT-B** :Functional Assessment of Cancer Therapy- Breast; **BCCA** : Breast Cancer Care Agency ;**PHQ-9**: Patient Health Questionnaire; **WHOQOL-BREF** :World Health Organization Quality of Life Instruments; **HADS:** Hospital Anxiety and Depression Scale; **GHQ-28** :General Health Questionnaire; **PWB**: Physical well-being; **SWB:** Social well-being; **FWB**: Functional well-being; **EWB** :Emotional well-being; **RT:** Radiotherapy; **BCS**; Breast Conservation Surgery;