Supplemental Table 1: Methodological Characteristics and Summary of Results for Studies Identified for Review

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| **Citation and Scientific Merit Rating**(Those shaded did not provide data for meta-analysis) | ***N*****Families (individuals)** | **Age range of Children** | **Cancer Diagnoses and Time Frame** | **Family Construct(s), Measure(s) Used and Reporter** | **Child Outcome(s), Measure(s) Used and Reporter** | **Findings** |
| Adduci et al. (2012)2.44 | 64(64 survivors,64 mothers; 64 fathers) | 4-18 years(*M =* 9.5; *SD* = 3.4) | Brain tumors;more than 1 year post-treatment  | Communication (Qualitative classification based on interview) | Problem Behavior (CBCL, one parent report) | - Families classified as displaying avoidant or ineffective communication had children with more Internalizing problems (*r* = -0.40, 95% CI: -0.60 – -0.19) - The groups did not differ significantly on Externalizing problems (*r* = -0.14, 95% CI: -0.39 – 0.10) Note: Bivariate associations calculated |
| Alderfer & Hodges (2010)2.00 | 161(161 siblings, 145 mothers, 16 fathers)Focus: Sibling Adjustment | 8-18 years(*M =* 12.6; *SD* = 2.9) | All diagnoses; 3 – 38 months post-diagnosis(*M* = 16.7, *SD* = 6.9) | Support (CASSS, sibling-report) | Problem Behavior, Social Competence (CBCL, parent report); Anxiety (RCMAS, sibling report); Depression (CDI, sibling report); PTSS (CPSS, sibling report) | Greater support from parents was significantly related to: fewer child-reported depression symptoms (*r* = -0.31, 95% CI: -0.44 – -0.16); fewer externalizing problems (*r* = -0.22, 95% CI: -0.36 – -0.07); fewer total behavior problems (*r* = -0.21, 95% CI: -0.36 – -0.06) and greater social competence (*r* = 0.24, 95% CI: 0.09 – 0.38) Parental support was not significantly related to: child-reported anxiety (*r* = -0.15, 95% CI: -0.30 – 0.01); PTSS (*r* = -0.12, 95% CI: -0.27 – 0.04), or internalizing problems (*r* = 0.09, 95% CI: -0.24 – 0.07) |
| Alderfer, Navsaria & Kazak (2009)2.67 | 150 (144 survivors, 144 mothers & 104 fathers) | 11-19 years (*M =* 14.7; *SD* = 2.4) | All diagnoses; 1-12 years(*M* = 5.3) post-treatment | Communication, Affective Responsiveness, Affective Involvement,Problem Solving, Behavioral Control, Roles, General Family Functioning (FAD, survivor, mother, father report) | PTSS (SCID, child interview) | - Communication was not significantly associated with PTSS based on survivor (*r* = 0.14, 95% CI: -0.02 – 0.30 ) mother (*r* = 0.15, 95% CI: -0.01 – 0.31), or father (*r* = 0.02, 95% CI: -0.17 – 0.21) report- Affective Responsiveness was significantly associated with PTSS based on survivor (*r* = 0.24, 95% CI: 0.08 – 0.39) and mother (*r* = 0.22, 95% CI: 0.06 – 0.37), but not father (*r* = 0.11, 95% CI: -0.08 – 0.30) report- Affective Involvement was significantly associated with PTSS based on survivor (*r* = 0.28, 95% CI: 0.12 – 0.42), but not mother (*r* = 0.16; 95% CI: -0.004 – 0.32) or father (*r* = 0.14, 95% CI: -0.05 – 0.32) report- Roles was significantly associated with PTSS based on survivor (*r* = 0.18, 95% CI: 0.02 – 0.33) and mother (*r* = 0.26, 95% CI: 0.10 – 0.41), but not father (*r* = 0.05, 95% CI: -0.14 – 0.24) report- Problem Solving was significantly associated with PTSS based on survivor (*r* = 0.21, 95% CI: 0.05 – 0.36) and mother (*r* = 0.19, 95% CI: 0.03 – 0.34), but not father (*r* = 0.08, 95% CI: -0.11 – 0.27) report- Behavioral Control was not significantly associated with PTSS based on survivor (*r* = 0.04, 95% CI: -0.12 – 0.20), mother (*r* = -0.01, 95% CI: -0.17 – 0.15), or father (*r* = -0.05, 95% CI: -0.14 – 0.24) report- General Family Functioning was significantly associated with PTSS based on survivor (*r* = 0.22, 95% CI: 0.06 – 0.37) and mother (*r* = 0.18, 95% CI: 0.02 – .33), but not father (*r* = 0.08, 95% CI: -0.11 – 0.27) report Note: Bivariate correlations provided by author |
| Barakat, Marmar & Schwartz (2010)2.44 | 102 (102 patients, 102 parents) | 13-19 years (*M =*15.8; *SD* =1.8 ) | All diagnoses;1-193 months (*M* = 20.5, SD = 38.6) post diagnosis | Roles (FAD, patient and parent report) | Quality of Life (PedsQL, patient and parent report)  | - Better defined family roles (patient report) were associated with better patient-reported psychosocial QOL (*r* = 0.27, 95% CI: 0.08 – 0.44)but were unrelated tophysical QOL (*r* = 0.09, 95% CI: -.11 – .28)- Better defined family roles (parent report) were significantly correlated with better parent-reported patient psychosocial QOL (*r* = 0.32, 95% CI: 0.13 – 0.48) and physical QOL (*r* = 0.19, 95% CI: -.005 – .37)Note: Cross-informant bivariate associations were not examined; sign of correlations reversed to aid interpretation. |
| Barakat, Kazak, Meadows, Casey, Meeske & Stuber (1997)2.22 | 309 (309 survivors, 309 mothers, 213 fathers); 219 controls (219 children, 211 mothers, 114 fathers) | 8-20 years (*M =*13.5; *SD* = 3.4 for survivors, *M* = 12.3; *SD* = 2.7 for controls) | All diagnoses except brain tumors; > 1 year post-treatment (*M* = 5.9; *SD* = 3.5) | Cohesion, Adaptability (FACES IIIa, parent report);  | PTSS (IES, TSC, PTSD-RI; child report);Anxiety (RCMAS, child report) | In regression equations including child age, gender, and race, cancer treatment intensity, years off treatment, child age at diagnosis, past perceived life threat, mother reported cohesion, satisfaction and adaptability and mother social support resources, cohesion (Beta = -0.02) and adaptability (Beta = 0.06) were not significant contributors to survivor PTSS (PTSD-RI score)Note: Bivariate associations unavailable |
| Barrera, Atenafu & Hancock (2009)2.33 | 99 at T1(99 mothers); 49 at T2 (49 mothers); and 48 at T3 (48 mothers)  | 1-17 years(*M =* 8.3; *SD* = 4.4) | Cancer and blood disorders, not brain tumor; T1: pre-SCT, T2: 1 year post, T3: 2 years post | Cohesion (FACES III, mother report) | QOL (CHQ, POQOL; mother report) | - Cohesion was not significantly correlated with any of the global or subscale QOL scores (6 indicators; 2 of which were psychosocial) cross-sectionally at T1, T2 or T3- Cohesion did not reach significance in regression equations predicting change in QOL from pre-SCT to 2 years post-SCTNote: Bivariate correlations not provided but estimation possible (*r*=0; one-tailed *p* = .50) |
| Beek (2014)2.22 | 51 (45 patients, 42 mothers, 8 fathers) | 12-18 years (*M =* 14.8; *SD* = 1.9) | Brain tumor; > 2 years post-diagnosis, (*M* = 7.4, *SD* = 3.3); off-treatment | Cohesion, Expressiveness, Conflict, Organization, Control, Family Values, Social Orientation (FES, patient and parent report) | Problem behavior (CBCL, parent report; YSR, patient report) | MANOVAs were used to compare patients with behavior problems to those without behavior problems across the 7 family functioning scales:- no differences for patient-reported family functioning as a function of self-reported internalizing or externalizing problems- no difference for parent-reported family functioning as a function of parent-report internalizing or externalizing problemsNote: Bivariate associations unavailable |
| Brown, Madan-Swain & Lambert (2003)2.00 | 52 (52 survivors, 52 mothers);42 controls(42 children without cancer; 42 mothers) | 12 – 23 years(*M* = 17 years;*SD* = 3.44) | Leukemia & solid tumors;1 – 14 years post-treatment(*M* = 5.8)  | Conflict (FES, mother and child report); Support (FES, mother and child report; Perceived Social Support-Family, child report) | PTSS (PTSD-RI, child report) | - Survivor-reported conflict was not significantly correlated with survivor PTSS (*r* = 0.16, 95% CI: -0.12 – 0.42)- Survivor-reported support was not significantly correlated with survivor PTSS (FES-Support: *r* = -0.09, 95% CI: -0.38 – 0.16; PSS-Fa: *r* = -0.12, 95% CI: -0.38 – 0.16)Note: Cross-informant bivariate associations not reported |
| Bruce, Gumley, Isham, Fearon & Phipps (2010)2.39 | 52 (52 survivors, 46 mothers, 6 fathers) | 8-16 years(*M* not reported) | Brain tumors; 0.5 – 7 years post-treatment(*M* not reported) | Conflict (PCIQ-R, parent and child report)  | PTSS (IES-8, child report) | - More survivor-reported conflict resolution skill within the family was significantly associated with less survivor PTSS (*r* = -0.34, 95% CI: -0.56 – -0.07) Note: Cross-informant bivariate associations not reported  |
| Carlson-Green, Morris & Krawiecki (1995)2.22 | 63 (63 patients; 63 mothers) | 2-16 years (*M =* 7.0; *SD* = 4.1) | Brain tumors;T1: 1-123 months (*M* = 44) post-diagnosis;T2: 3 – 56 months later (*M* = 24; *SD* = 13.4) | Cohesion, Control (FES, parent report) | Problem behavior (CBCL, parent report) | - Cohesion at T1 was not significantly associated with total behavioral problems at T2 (*r* = -0.12, 95% CI: -0.36 – 0.13)- Control at T1 was not significantly associated with total behavioral problems at T2 (*r* = 0.14, 95% CI: -.11 – .38) |
| Cohen, Friedrich, Jaworski, Copeland & Pendergrass (1994)2.11 | 129 (125 mothers, 4 fathers)Focus: Sibling Adjustment | 4-16 years (*M =* 10.0; *SD* = 3.6) | Leukemia, lymphoma, solid tumors; 0-4 years post-diagnosis | Cohesion, Adaptability (FACES II, parent report) | Problem behavior; Social competence (CBCL, parent report) | Comparisons between disengaged, connected and enmeshed families revealed:- no differences for internalizing- the disengaged group (low cohesion) had higher externalizing and lower social competence scores than the enmeshed group (high cohesion)- the connected group (moderate cohesion) fell between disengaged and enmeshed groups for externalizing and social competence scoresComparisons between rigid, flexible and chaotic groups revealed:- no difference for internalizing- the rigid (low adaptability) and flexible (moderate adaptability) groups had higher externalizing and lower social competence scores than the chaotic (high adaptability) group- rigid and flexible groups were not significantly differentNote: Bivariate associations calculated |
| Dolgin et al., (1997)-Study 22.00 | 70(70 parents)Focus: Sibling Adjustment | 6 – 18 years(*M* = 12.2,*SD* = 3.8) | Leukemia, lymphoma, solid tumors;14 – 42 months(*M* = 26.7) post-diagnosis | Support, Expressiveness, Conflict (Family Relations Scale, parent report) | Problem behavior (CBCL, parent report) | - Greater expressiveness was associated with fewer Internalizing (*r* = -0.26, 95% CI: -0.47 – -0.03), Externalizing (*r* = -0.20, 95% CI: -0.42 – 0.04) and Total Problems (*r* = -0.22, 95% CI: -0.43 – 0.02)- Greater support was associated with fewer Internalizing (*r* = -0.59, 95% CI: -0.69 – -0.35), Externalizing (*r* = -0.54, 95% CI: -0.73 – -0.41) and Total Problems (*r* = -0.67, 95% CI: -0.78 – 0.52)- Greater conflict was associated with more Internalizing (*r* = 0.31, 95% CI: 0.08 – 0.51 ), Externalizing (*r* = 0.47, 95% CI: 0.26 – 0.64) and Total Problems (*r* = 0.47, 95% CI: 0.26 – 0.64)Note: Signs reversed to aid interpretation |
| Horwitz & Kazak (1990)2.00 | 25 (25 mothers); 25 controls (25 mothers)Focus: Sibling Adjustment | 3-5 years (*M =* 4.7; *SD* = 1.0) | All diagnoses; 6-41 months post-diagnosis(*M* = 16.4, *SD* = 8.5)  | Cohesion, Adaptability (FACES II, parent report) | Problem behavior (CBCL, parent report) | - Greater cohesion was significantly associated with fewer total behavior problems (*r* = -0.65, 95% CI: -0.83 – -0.34), internalizing (*r* = -0.63, 95% CI: -0.82 – -0.31) and externalizing (*r* = -0.56, 95% CI: -0.78 – -0.21) symptoms - Greater adaptability was significantly associated with fewer total behavior problems (*r* = -0.41, 95% CI: -0.69 – -0.02) and internalizing symptoms (*r* = -0.49, 95% CI: -0.74 – -0.12) ; externalizing results not reported |
| Houtzager, Oort, Hoekstra-Weebers, Caron, Grootenhuis & Last (2004)2.56 | 56 at T1(83 siblings, 56 parents); 45 at T2 (66 siblings; 45 parents);40 at T3(60 siblings; 40 parents);38 at T4 (57 siblings, 38 parents)Focus: Sibling Adjustment | 7-19 years (*M =* 11.0; *SD* = 2.8) at T1 | All diagnoses; 1, 6, 12 & 24 months post-diagnosis | Cohesion, Adaptability (FACES, sibling report) | Problem behavior (CBCL, parent report; YSR, child report); Anxiety (STAI-C, child report); Quality of life (DuCATQoL, child report); Emotional Reactions (SSERQ-s, child report)  | When entered into multiple regression equations including child gender, age, cancer diagnosis, number of days hospitalized, death of child with cancer, coping, parent mental health, cohesion and adaptability:- greater cohesion was associated with more anxiety and insecurity but was unrelated to QOL, self- and parent-reported behavior problems, loneliness and positive emotions- greater adaptability was associated with more anxiety, poorer QOL, more self-reported behavioral problems, more insecurity and loneliness, but was unrelated to parent-reported behavioral problems and positive emotionsNote: Bivariate associations unavailable |
| Jobe-Shields, Alderfer, Barrera, Vannatta, Currier & Phipps (2009)2.33 | 146 (146 patients, 146 parents) | 6 – 18 years(*M* = 13.2,*SD* = 3.7) | Stem cell or Bone marrow transplant (85% had cancer diagnoses); At time of transplant | Cohesion, Expressiveness, Conflict (FES, parent report) | PTSS (PTSD-RI, child report) | - Cohesion (*r* = -0.12, 95% CI: -0.28 – 0.04), and conflict (*r* = .09, 95% CI: -0.74 – 0.25) were not significantly associated with child illness-related PTSS; however, greater expressiveness was related to less PTSS (*r* = -0.17, 95% CI: -0.32 – -0.01)- Cohesion and parental depression interacted such that cohesion only predicted child PTSS when parental depression was low |
| Kazak et al., (1997)2.56 | 130 (130 survivors, 130 mothers, 96 fathers),  | 8-19 years (*M =* 13.5; *SD* = 3.4) | Leukemia; > 1 year post-treatment (*M* = 5.8; *SD* = 3.1) | Communication,General Family Functioning (FACES IIIa, mother and father report) | Anxiety (RCMAS, child report); PTSS (PTSD Index, IES, TSC, child report) | - Neither Communication nor General Family Functioning as reported by either mothers or fathers were associated with survivor Anxiety or PTSS (three scales)Note: Bivariate correlations not provided, but estimation possible (*r*s = 0) |
| Kim & Yoo (2010)2.06 | 74 (74 patients) | 10-15 years (*M =* 13.1; *SD* = 2.2) | All diagnoses, no CNS involvement; .5 – 14 years (*M* = 4.2, *SD* = 3.8) post-diagnosis | Cohesion, Adaptability (FACES III, child report) | Resilience (Resilience Scale, child report) | - Greater cohesion was associated with more resilience (*r* = 0.51, 95% CI: 0.32 – 0.66)- Greater adaptability was associated with more resilience (*r* = 0.47, 95% CI: 0.27 – 0.63)  |
| Long, Marsland & Alderfer (2013)2.39 | 209 (209 siblings, 186 mothers, 70 fathers)Focus: Sibling Adjustment | 8-18 years (*M =* 12.5; *SD* = 2.7) | All diagnoses; 1-38 months post-diagnosis (M = 17.5, SD = 7.7) | General Family Functioning (FAD, sibling and parent report) | Depression (CDI, sibling report), Anxiety (RCMAS, sibling report), PTSS (CPSS, sibling report) | - Better general family functioning (child report) was significantly associated with fewer depression (*r* = -0.50, 95% CI:-.60 – -.39 ), anxiety (*r* = -0.33, 95% CI: -.45 – -.20) and post-traumatic stress symptoms (*r* = -0.39, 95% CI: -.50 – -.27)- General family functioning (mother report) was unrelated to child depression (*r* = -0.08, 95% CI: -.22 – .07), anxiety (*r* = -0.02, 95% CI: -.16 – .12) and post-traumatic stress symptoms (*r* = -0.01, 95% CI: -.15 – .13)- General family functioning (father report) was unrelated to child depression (*r* = -0.13, 95% CI: -.35 – .11), anxiety (*r* = -0.12, 95% CI: -.35 – .12) and post-traumatic stress symptoms (*r* = -0.11, 95% CI: -.34 – .13)Note: Bivariate correlations provided by author; signs reversed to aid interpretation |
| Maurice-Stam, Grootenhuis, Brons, Caron & Last (2007)2.22 | 106 (52 patients; 54 parents) | 1-5 years and 8-15 years (*M* = 7.9, *SD* = 4.5) | All diagnoses; 2.0 – 29.7 months post-diagnosis (*M* = 13.7, *SD* = 8.2); all off treatment at least 2 months  | Cohesion, Adaptability, (FACES, parent report),Communication (Exchange of Emotions Questionnaire, child report) | Quality of Life (TAPQOL, parent report; TACQOL, DUCATQoL, child report) | For 1-5 year olds (TAPQOL):- Greater cohesion was associated with more anxiety related to health status (*r* = 0.41, 95% CI: 0.15 – 0.62) but was unrelated to problem behavior related to health status (*r* = 0.10, 95% CI: -0.18 – 0.36) and motor problems (*r* = 0.12, 95% CI: -0.18 – 0.39)- Adaptability was not associated with anxiety related to health status (*r* = -0.10, 95% CI: -0.37 – 0.18), problem behavior related to health status (*r* = 0.11, 95% CI: -0.17 – 0.38) or motor problems (*r* = 0.12, 95% CI: -0.18 – 0.39)For 8-15 year olds (self-reported QOL):- Cohesion was not associated with overall QOL (*r* = 0.29, 95% CI: -0.00 – 0.53)- Adaptability was not associated with overall QOL (*r* = -0.24, 95% CI: -0.49 – 0.06)- Greater expressiveness was unrelated to overall QOL (M1: *r* = -0.15, 95% CI: -0.42 – 0.14; M2: *r* = 0.17, 95% CI: -0.12 – 0.43) Note: Bivariate correlations provided by author; sign reversed for TAPQOL to aid interpretation |
| Morris et al. (1997)2.11 | 65 (33 parents of children with cancer; 32 parents of controls) | Children with cancer:2 – 16 years(*M* = 6.0);Controls:2 – 11 years(*M* = 5.4 years) | ALL & children visiting pediatrician; Time frame from cancer diagnosis not reported | Cohesion, Expressiveness, Conflict (FES, parent report) | Problem behavior (CBCL, parent report) | For children with cancer:- Greater cohesion was associated with fewer internalizing problems (*r* = -0.37, 95% CI: -0.63 – -0.03) but was not associated with externalizing problems (*r* = -0.14, 95% CI: -0.46 – 0.21) - More expressiveness was associated with fewer internalizing (*r* = -0.34, 95% CI: -0.61 – 0.00) but was not associated with externalizing problems (*r* = -0.15, 95% CI: -0.47 – 0.20) - More conflict was associated with more externalizing (*r* = 0.42, 95% CI: 0.09 – 0.67) but was not associated with internalizing problems (*r* = 0.18, 95% CI: -0.17 – 0.49) |
| Newby (2000)1.89 | 42 (42 mothers, 42 fathers) | 6-18 years (*M =* 13.1; *SD* = 2.8) | All diagnoses except brain tumors; 2 – 17 years post-treatment (*M* = 6.8; *SD* = 3.2) | Cohesion, Expressiveness, Organization (FES, parent report) | Problem behavior (CBCL, parent report) | - More cohesion was associated with fewer total behavior problems (*r* = -.33, 95% CI: -0.58 – -0.03)- Expressiveness (*r* = .04, 95% CI: -0.27 – 0.34) and Organization (*r* = .14, 95% CI: -0.17 – 0.43) were not associated with total behavior problems  |
| Ozono (2010)2.17 | 89 (88 survivors, 87 mothers, 72 fathers) | 12-20 years (*M =* 16.2; *SD* = 2.2) | All diagnoses except brain tumors; > 5 years post-diagnosis (*M* = 10.8; *SD* = 3.4) | General Family Functioning (FRI, child, mother and father report) | Anxiety (STAI, child report); Depression (CDI, child report);PTSS (IES-R, child report) | Three family functioning clusters were identified: supportive (high cohesion & expressiveness; low conflict); intermediate (moderate cohesion, expressiveness & conflict) and conflictive (low cohesion & expressiveness, high conflict)- Survivors in “conflictive families” reported more PTSS, more depressive symptoms and more anxiety than those in “supportive families.” Note: Bivariate associations calculated |
| Ozono (2007)2.22 | 89 (88 survivors, 87 mothers, 72 fathers) | 12-20 years (*M =* 16.2; *SD* = 2.3) | All diagnoses except brain tumors; 5-19 years (M = 10.8) post-diagnosis | Communication, Roles, Problem Solving, Affective Involvement, Affective Responsiveness, Behavioral ControlGeneral Family Functioning (FAD; child report) | PTSS (IES-R, child report) | - Survivors with severe PTSS had families with poorer roles and affective responsiveness than survivors without PTSS- No differences between groups for communication, problem solving, affective involvement, behavioral control or general family functioningNote: Bivariate associations calculated/estimated |
| Pelcovitz (1998)1.89 | 23 (23 patients, 23 mothers); 27 abused adolescents; 23 healthy, nonabused adolescents | 14-23 years (*M =* 16; *SD* not reported) | Leukemia, lymphoma, carcinoma, Wilm’s tumor;0 – 11 years (*M* = 3.3) post active treatment | Cohesion,Adaptability (FACES III, child report) | PTSD (Structured Clinical Interview for DSM, child report) | Those meeting criteria for PTSD were compared to those not meeting criteria on family functioning:- cohesion results not reported- adolescents with PTSD saw their families as more chaotic (high in adaptability) than those without PTSDNote: Bivariate associations unavailable |
| Penn (2009)2.17 | 35 (35 patients, 35 parents) | 1-16 years (*M =* 9.1; *SD* not reported) | Brain tumors; 1 (0.8-5.0), 6 & 12 (11.2-18.7) months post-diagnosis | General family functioning (FAD, parent report)  | Quality of life (PedsQL, parent and child report) | - General Family Functioning was not associated with parent-reported child QOL at T1 (*r* = 0.09, 95% CI: -0.27 – 0.43), T2 (*r* = -0.02, 95% CI: -0.37 – 0.33) or T3 (*r* = -0.13, 95% CI: -0.45 – 0.22)- General Family Functioning was not associated with child-reported QOL at T1 (*r* = 0.07, 95% CI: -0.35 – 0.47), T2 (*r* = 0.15, 95% CI: -0.26 – 0.52) or T3 (*r* = -0.20, 95% CI: -0.54 – 0.20)- General Family Functioning at T1 was not associated with parent-reported child QOL at T3 (*r* = 0.04, 95% CI: -0.31 – 0.38) or child-reported QOL at T3 (*r* = -0.07, 95% CI: -0.45 – 0.33) |
| Phipps & Mulhern (1995)2.22 | N = 34 – 41 families at T1 and 13 – 15 families at T2 (equal numbers of patients and parents) | 4 – 16 years(M = 10.6, SD = 5.7) | SCT or BMT for oncological or hematologic diagnoses, not including brain tumors or severe combined immune deficiency; 1 week before transplant and 6 – 12 months (*M* = 8.2) post-transplant | Cohesion, Expressiveness, Conflict (FES, parent report) | Problem behavior, Social competence (CBCL, parent report); Anxiety, (Piers Harris Self-Concept Scale, child report) | Cross-sectional results pre-transplant:- Correlations between cohesion and internalizing (*r* = -0.27, 95% CI: -0.53 – 0.04), externalizing (*r* = -0.28, 95% CI: -0.54 – 0.03), total behavior problems (*r* = -0.20, 95% CI: -0.48 – 0.12), social competence (*r* = 0.09, 95% CI: -0.22 – 0.39) and child-reported anxiety (*r* = -0.16, 95% CI: -0.47 – 0.19) sign reversed to aid interpretation were non-significant.- Greater expressiveness was associated with fewer internalizing symptoms (*r* = -0.32, 95% CI: -0.57 – -0.01), but was unrelated to externalizing (*r* = -0.23, 95% CI: -0.50 – 0.08), total behavior problems (*r* = -0.23, 95% CI: -0.50 – 0.08), social competence (*r* = 0.06, 95% CI: -0.25 – 0.36) and child-reported anxiety (*r* = -0.25, 95% CI: -0.47 – 0.19) sign reversed - More conflict was associated with more internalizing (*r* = 0.49, 95% CI: 0.22 – 0.69), externalizing (*r* = 0.57, 95% CI: 0.32 – 0.75) and total behavior problems (*r* = 0.48, 95% CI: 0.20 – 0.69), but was not associated with social competence (*r* = 0.06, 95% CI: -0.25 – 0.36) or anxiety (*r* = 0.24, 95% CI: -0.11 – 0.54)sign reversedProspective results:- Cohesion pre-transplant was not associated with internalizing (*r* = -0.45, 95% CI: -0.78 – 0.08), externalizing (*r* = -0.32, 95% CI: -0.72 – 0.23), or total behavior problems (*r* = -0.40, 95% CI: -0.76 – 0.14), but was associated with greater social competence (*r* = 0.60, 95% CI: -.13 – 0.85), and less anxiety post-transplant (*r* = -0.54, 95% CI: -0.84 – 0.02)sign reversed- More expressiveness pre-transplant was associated with fewer internalizing (*r* = -0.71, 95% CI: -0.90 – -0.31) and externalizing problems (*r* = -0.57, 95% CI: -0.84 – -0.08), better social competence (*r* = 0.61, 95% CI: 0.14 – 0.86), and less child-reported anxiety post-transplant (*r* = -0.92, 95% CI: -0.98 – -0.75)sign reversed; the correlation with total behavior problems did not reach statistical significance (*r* = -0.35, 95% CI: -0.73 – 0.20)- More conflict pre-transplant was associated with more internalizing (*r* = 0.73, 95% CI: 0.35 – 0.90) and total behavior problems (*r* = 0.60, 95% CI: 0.13 – 0.85), less social competence (*r* = -0.61, 95% CI: -0.86 – 0.14), and more child-reported anxiety post-transplant (*r* = 0.57, 95% CI: 0.03 – 0.85)sign reversed; correlations with externalizing symptoms did not reach statistical significance (*r* = 0.44, 95% CI: -0.09 – 0.78) |
| Rait, Ostroff, Smith, Cella, Tan & Lesko, 19922.0 | 88 (88 survivors) | 12-19 years (*M =* 15.6; *SD* = 1.8) | Hematological malignancies; At least 3 months post-treatment(*M* = 37.4; SD = 29.7) | Cohesion / Adaptability (FACES III, child report) | Mental Health (Rand MHI, child report); Self-esteem (Rosenberg Self-Esteem Scale, child report); Problem behavior, Social competence (YSR, child report) | After controlling for sex, age, age at diagnosis and time since treatment, and when entering cohesion and adaptability together in regression equations:- More cohesion (Beta - .42) and less adaptability (Beta = -.27) were was associated with better mental health - More cohesion (Beta = .34) and less adaptability (Beta = -.31) were associated with better self-esteem- More cohesion was associated with fewer total behavioral problems (Beta = -.23); adaptability was non-significant (Beta = .11) - More cohesion was associate with better social competence (Beta = .26); adaptability was no-significant (Beta = .15)Note: Bivariate associations unavailable |
| Santos, Crespo, Canavarro & Kazak (2015)2.56 | 389 (389 patients; 389 parents) | 8-20 years (M = 13.3; SD = 3.5) | All diagnoses; 3-132 months (M = 28.2; SD = 27.0) post-diagnosis | Cohesion (FES, patient, parent report) | QOL (PedsQL Cancer Module, child report) | - Parent reports of cohesion were not significantly associated with child QOL (*r* = 0.04, 95% CI: -.06 – .14)- Child reports of greater cohesion were significantly associated with greater child QOL (*r* = 0.19, 95% CI: .09 – .28) |
| Sawyer (1998)1.89 | 38 (38 mothers) | 2-5 years (*M =*3.5; *SD* = 1.1) | All diagnoses except brain tumors; T1: at diagnosis (M = 5.3 weeks; SD = 3.5); T2: ~2 years post-diagnosis (details not reported) | General Family Functioning (FAD, parent report) | Problem behavior (CBCL, parent report) | Better family functioning at T1 was significantly associated with fewer Externalizing problems (*r* = -0.34, 95% CI: -0.60 – -0.02) and Total behavior problems (*r* = -0.37, 95% CI: -0.62 – -0.06) at T2, but was not associated with Internalizing problems (*r* = -0.24, 95% CI: -0.52 – -0.09)Note: Signs reversed to aid interpretation |
| Trask, Paterson, Trask, Bares, Birt & Mann (2003)2.44 | 28 (28 patients, 28 parents) | 11-18 years (*M =* 13.6; *SD* = 1.9) | All diagnoses; 1 month post-diagnosis to 12 months post- treatment (*M* = 18 months post-diagnosis; *SD* = 20) | Cohesion, Adaptability (FACES II, child report)Support (SSSC, child report) | Problem behavior (YSR, child report) | Cohesion, Adaptability and Support were not significantly associated with internalizing or externalizing symptoms; correlations not providedNote: Bivariate correlations unavailable, but could be estimated (*r*s = 0) |
| Varni, Katz, Colegrove & Dolgin (1996)2.44 | 62 at T1 (59 mothers, 3 fathers);42 at T2;47 at T3 | 5 – 13 years(*M* = 8.0,*SD* = 2.3) | All cancer diagnoses;1 month, 6 months, and 9 months post-diagnosis | Cohesion, Expressiveness, Conflict (FES, parent report) | Problem behavior, Social competence (CBCL, parent report) | Cross-sectional Results:- Greater cohesion was associated with fewer internalizing problems at T1(*r* = -0.33, 95% CI: -0.54 – -0.09), T2 (*r* = -0.51, 95% CI: -0.71 – -0.24) and T3 (*r* = -0.30, 95% CI: -0.54 – -0.01); fewer externalizing problems at T1 (*r* = -0.50, 95% CI: -0.67 – -0.29) and T2 (*r* = -0.57, 95% CI: -0.75 – -0.32), but not T3 (*r* = -0.20, 95% CI: -0.46 – 0.09); and greater social competence at T1 (*r* = 0.36, 95% CI: 0.12 – 0.56) and T2 (*r* = 0.52, 95% CI: 0.26 – 0.71), but not T3 (*r* = 0.23, 95% CI: -0.06 – 0.49)- Greater expressiveness was associated with fewer internalizing problems at T1(*r* = -0.38, 95% CI: -0.58 – -0.14), T2 (*r* = -0.38, 95% CI: -0.61 – -0.09) and T3 (*r* = -0.24, 95% CI: -0.49 – 0.05); fewer externalizing problems at T1 (*r* = -0.34, 95% CI: -0.54 – -0.10), T2 (*r* = -0.44, 95% CI: -0.66 – -0.16), and T3 (*r* = -0.25, 95% CI: -0.50 – 0.04); and greater social competence at T1 (*r* = 0.24, 95% CI: -0.01 – 0.46), T2 (*r* = 0.49, 95% CI: 0.22 – 0.69), and T3 (*r* = 0.26, 95% CI: 0.08 – 0.59)- More conflict was associated with more internalizing problems at T1 (*r* = 0.21, 95% CI: -0.04 – 0.44), but not at T2 (*r* = 0.14, 95% CI: -0.17 – 0.43) or T3 (*r* = 0.06, 95% CI: -0.23 – 0.34); more externalizing problems at T1 (*r* = 0.23, 95% CI: -0.21 – 0.45), but not at T2 (*r* = 0.21, 95% CI: -0.10 – 0.48) or T3 (*r* = 0.24, 95% CI: -0.07 – 0.51) and was not associated with social competence at T1 (*r* = -0.08, 95% CI: -0.32 – 0.17), T2 (*r* = 0, 95% CI: -0.30 – 0.30) or T3 (*r* = 0, 95% CI: -0.29 – 0.29).Prospective Results:- Greater cohesion at T1 was significantly associated with fewer internalizing problems at T2 (*r* = -0.35, 95% CI: -0.59 – -0.05) and T3 (*r* = -0.39, 95% CI: -0.62 – -0.11); externalizing problems at T2 (*r* = -0.56, 95% CI: -0.74 – 0.31) and T3 (*r* = -0.44, 95% CI: -0.65 – -0.17), and social competence at T2 (*r* = 0.39, 95% CI: 0.10 – 0.62) and T3 (*r* = 0.32, 95% CI: 0.03 – 0.56)- Greater expressiveness at T1 was significantly associated with fewer internalizing problems at T2 (*r* = -0.29, 95% CI: -0.55 – 0.02) and T3 (*r* = -0.40, 95% CI: -0.62 – -0.12) and fewer externalizing problems at T2 (*r* = -0.36, 95% CI: -0.60 – -0.06) and T3 (*r* = -0.32, 95% CI: -0.56 – -0.03); expressiveness at T1 was not significantly associated with social competence at T2 (*r* = 0.29, 95% CI: -0.02 – 0.55) but it was associated with greater social competence at T3 (*r* = 0.26, 95% CI: -0.04 – 0.52)- Conflict at T1 was not significantly associated with internalizing problems at T2 (*r* = 0.22, 95% CI: -0.09 – 0.49) or T3 (*r* = 0.08, 95% CI: -0.22 – 0.37); externalizing problems at T2 (*r* = 0.24, 95% CI: -0.07 – 0.51) or T3 (*r* = 0.14, 95% CI: -0.16 – 0.42), or social competence at T2 (*r* = -0.19, 95% CI: -0.47 – 0.12) or T3 (*r* = -0.24, 95% CI: -0.57 – 0.06)  |
| Varni (1994)2.33 | 30 (30 patients, 30 parents) | 8-13 years (*M =* 10.7; *SD* = 1.7) | All diagnoses; 9 months post-diagnosis (range, etc not provided) | Support (SSSC-parents, child report) | Problem behavior (CBCL, parent report); Depression (CDI, child report); Anxiety (STAIC, child report); Self-esteem (SPPC, child report) | Greater support from parents was associated with fewer depressive symptoms (*r* = -0.34, 95% CI: -0.62 – 0.02) and externalizing problems (*r* = 0.32, 95% CI: -0.61 – 0.05), but was unrelated to internalizing problems (*r* = 0.01, 95% CI: -0.35 – 0.37), anxiety (*r* = -0.28, 95% CI: -0.58 – 0.09), and self-esteem (*r* = 0.25, 95% CI: -0.12 – 0.56)  |
| Wang & Martinson (1996)2.22 | 45 at Time 1 (90 parents, 45 siblings);30 at Time 2Focus: Siblings | 7-16 years (*M, SD* not reported) | Leukemia, solid tumors; T1: > 6 months post-diagnosis, T2: 12 months later | Cohesion(FES, parent report) | Social competence (CBCL, parent report) | - Greater cohesion was associated with greater social competence at both T1 and T2Note: Prospective associations were not investigated; bivariate correlations were not provided but could be estimated |
| Wesley (2013)2.44 | 102 (102 patients) | 13-19 years (*M =* 15.6; *SD* = 1.8) | All diagnoses; 1-196 months (*M* = 20.7, *SD* = 37.4)post-diagnosis and on treatment | Support (PSS-Fa, child report); General Family Functioning (FAD, child report)  | Positive and Negative affect (PANAS, child report) | - Family support was not significantly correlated with positive (*r* = 0.10, 95% CI: -0.10 – 0.29) or negative (*r* = -0.09, 95% CI: -0.28 – 0.11) affect- Better family functioning was significantly correlated with more positive affect (*r* = 0.17, 95% CI: -0.03 – 0.35); but was unrelated to negative affect (*r* = -0.12, 95% CI: -0.31 – 0.08)sign reversed for interpretation |
| Yonemoto (2009)1.39 | 30 (30 survivors) | > 20 years (*M*, *SD* not reported) | Osteosarcoma; 5-30 years (*M* = 16.8) post-treatment | General Family Functioning (APGAR, child report) | PTSS (IES-R, child report);Post-traumatic growth (PTGI, child report) | Better general family functioning was significantly correlated with less survivor PTSS (r = -.50, 95% CI: -.73 – -.17), but was unrelated to post-traumatic growth (r = .30, 95% CI: -.07 – .60) |