**S4 Appendix: Characteristics of included studies**

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| **Table 3 Characteristics of included studies** | | | | | | | | |
| **Author; country; year of publication** | **Research design** | **Study population; care recipient % men; care recipient age mean (SD)** | **Sample size: baseline; follow-up** | **Exposure measure** | **Outcome measure** | **Quality score** | **Statistical results** | **Adjusted or unadjusted** |
| Bakker et al.[[1](#_ENREF_1)]; the Netherlands; 2013 | 2 year cohort | Dementia dyads. 55%.  YoD: 61.3 (SD=5.4); LoD: 80.9 (SD=5.8). | 328; 328 | Neuropsychiatric Inventory Distress scale (NPI-D). | Institutionalisation | 73% | Cox proportional Hazard Model - Caregiver distress (NPI-D): Hazard Ratio= 1.011; CI 0.975 - 1.048; p=.559. | Adjusted for young vs late onset dementia; carer age; carer sex; spousal carer; advanced dementia; diagnosis (Alzheimer’s dementia, front temporal dementia, mixed/vascular dementia, other dementias); neuropsychiatric symptoms (hyperactivity, psychosis, mood, apathy); caregiver distress (NPI-D); caregiver sense of competence (SSCQ); time from symptom onset at inclusion; interaction group with dementia severity; interaction group with apathy score. |
| Banerjee et al.[[2](#_ENREF_2)]; UK; 2003 | 1 year cohort | Dementia dyads. % men not provided. Mean (SD) age not provided. | 100; 69 | Zarit Burden Interview. | Institutionalisation | 30% | Logistic regression: carer burden (ZBI) Odds Ratio=1.02; CI 0.96-1.08; p=0.542. | Adjusted for age of person with dementia (pwd); female sex of pwd; female sex of carer; carer mental health; carer quality of life - psychological; person with dementia behaviour problems; carer burden score; person with dementia ADAS-cognitive score; spouse carer; co-resident carer. |
| Bannister et al.[[3](#_ENREF_3)]; UK; 1998 | 1 year cohort | Dementia dyads. 27% . 79.8 (SD not provided) | 124; 116 | Carer depression assessed using the GMS schedule [[4](#_ENREF_4)]. | Residential or nursing home care | 48% | Carer RDC depression: admitted 5 (20%); not admitted 26 (29%). | Unadjusted |
| Bond et al.[[5](#_ENREF_5)]; Australia; 2002 | 2 year cohort | Dementia dyads. % men continued receiving care: 50%; discontinued receiving care 64%. Continued receiving care age: 73.1 (SD 6.9); Discontinued receiving care age 75.2 (SD 6.5). | 163; 158 | Geriatric Depression Scale. | Yielding care to permanent supported accommodation | 50% | Carer geriatric depression scale score was significantly different in those continuing to care ( M=8.8; SD=6.2) compared to those yielding to care (M=11.2; SD=6.4; p<.05). | Unadjusted |
| Brodaty et al.[[6](#_ENREF_6)]; Australia; 1993 | 5 year controlled intervention study | Dementia dyads. 51%. 70.2 (SD not provided) | 91; 91 | Stress measured with General Health Questionnaire. | Actual nursing home placement | 40% | Impairment on GHQ (carer stress) was significant predictor of placement (p<.05). Those institutionalised n=69; not institutionalised n=22. | Adjusted for type of dementia; age; gender; severity of dementia; deterioration of dementia; degree of neuroticism of carer; degree of carer satisfaction with personal contacts; degree of satisfaction with telephone contacts. |
| Brown et al.[[7](#_ENREF_7)]; United States; 1990 | 1 year cohort | Subjects of the geriatric assessment programme of the University of Nebraska Medical Centre. 30%. 72 (SD 7.2) | 109; 109 | Zarit Burden Interview. | Nursing home placement | 55% | Significant difference in T-test in caregiver burden for individuals whose CR was admitted to a nursing home (n=27) compared to those where no placement took place (n=82; p<.01). | Unadjusted |
| Camden et al.[[8](#_ENREF_8)]; UK; 2011 | 1 year cohort | Dementia dyads. 85%. 83.1 (SD=8.0) | 111; 111 | Zarit Burden Interview. Carer anxiety with anxiety subscale of HADS. | Living in 24-hr care | 83% | ZBI: Cox regression for admission to 24-hour care, burden score: Hazard Ratio=1.023; 95%CI=0.02-.069; p=0.255..  HADS: Cox regression for admission to 24-hour care, carer anxiety score: Hazard Ratio=0.964; 95% CI=0.85-1.09; p=0.553. | Adjusted for negative vs positive reason for caring; neutral vs positive reason; carer gender; carer age; care recipient gender; care recipient age; child of care recipient; NPI score; ADL score; MMSE score; burden score; carer anxiety score. |
| Chuang et al.[[9](#_ENREF_9)]; Taiwan; 2005 | 1 month cohort | Stroke patients. % men readmission: 25%; % men non-readmission: 75%. Readmission: 73.8 (SD=9.77); Non-readmission: 73.0 (SD=10.7) | 489; 489 | Carer burden index. | Readmission to hospital within 1 month | 85% | Stressed n=149; n not stressed=340; n stressed admitted=47; n not stressed admitted=102. Chi square for differences between burden groups =9.32; p<.01. | Unadjusted |
| Cohen et al.[[10](#_ENREF_10)]; Canada; 1993 | 18 month cohort | Dementia dyads. % men not provided. 77.46 (no SD given) | 196; 156 | Zarit Burden Interview. | Institutionalisation | 50% | Carers who placed their dependent at 18 months (n=100) reported higher levels of burden (M=42.92; SD=15.25) than those who did not (n=56; M=37.02; SD=14.32) [f (1,132) =4.37; p<.05]. | Unadjusted |
| Cohen-Mansfield and Wirtz.[[11](#_ENREF_11)]; United States; 2007 | 3 year cohort | Adult day care participants. 34%. 79.96 (SEM 8.00) | 201; 199 | Zarit Burden Interview. | Any nursing home admission | 65% | Bivariate analysis with cox regression: caregiver burden risk ratio =1.91; p=.001; CI 1.29-2.82. | Unadjusted |
| Colerick and George.[[12](#_ENREF_12)]; United States; 1986 | 1 year cohort | Alzheimer's Disease dyads. % men not provided. Home caregiving: 68.71 (SD not provided); Became institutionalised: 68.89 (SD not provided). | 510; 209 | Stress measured with Langer 22-item screening scale [[13](#_ENREF_13)]. | Institutionalisation | 45% | Stress symptoms for those who continued home caregiving: M=8.75; those who became institutionalised: M=9.41; P=<.05. | Unadjusted |
| Deimling et al.[[14](#_ENREF_14)]; United States; 1985 | 6 month cohort | Families living with and caring for an older relative. % men not provided. Mean (SD) age not provided. | 64; 64 | Stress effects with composite measured created for study. Zung depression scale. | Institutionalisation | 43% | Carer’s stress scores of those who institutionalised the care recipient (M=8.38) were not significantly different from those who did not (M=6.61; F=3.222;p=>.05). Carer’s depression scores of those who institutionalised the care recipient (M=49.01) were not significantly different from those who did not (M=48.32; F=0.076;p=>.05). | Unadjusted |
| Drame et al.[[15](#_ENREF_15)]; France; 2013 | 6 month cohort | Patients aged 75 and over hospitalised via the Emergency Department. 35%. 85 (SD=6) | 1047; 1047 | Zarit Burden Interview. | Nursing home was defined as any type of residential care establishment or long-term care hospital unit | 95% | Admitted n=184; n not admitted=863. Caregiver burden p<0.001. | Unadjusted |
| Fisher, Lieberman.[[16](#_ENREF_16)]; United States; 1999 | 2 year cohort | Alzheimer's Disease dyads. 46%. Non NHP: 76 (SD 7.6); NHP: 78 (SD 6.4). | 211; 164 | Carer strain 11-item scale developed by Niedereche and Fruge [[17](#_ENREF_17)]. | Nursing home placement | 50% | No significant difference was found between those who placed their care recipient in a nursing home (n=79; carer strain M=22.7; SD= 5.2) and those who didn't (n=85; carer M=22.1; SD= 5.6; t=0.78; p=.43). | Unadjusted |
| Gaugler et al.[[18](#_ENREF_18)]; United States; 2005 | 3 year cohort | Dementia dyads. 40%. 79 (SD=8.8). | 5831; 5831 | Zarit burden Interview. | Long term nursing home placement | 60% | ZBI burden score admitted M=13.2; SD=6.36. Not admitted M=12.02; SD=6.34. | Unadjusted |
| Haupt, Kurz.[[19](#_ENREF_19)]; UK; 1993 | 1 year cohort | Alzheimer's Disease dyads. 25%. 73 (SD not provided) | 90; 66 | Items of the Zarit burden interview were used. | Nursing home placement | 40% | No significance was found between carer burden scores in those who did not institutionalise (M=2.8; SD=1.0) and those who did (M=3.3; SD 0.9; F=3.12) institutionalise their care recipient | Unadjusted |
| Hebert et al.[[20](#_ENREF_20)]; Canada; 2001 | 5 year cohort | Dementia dyads. % men not provided. Mean (SD) age not provided. | 326; 293 | Zarit burden Interview. Depression with CES-D. | Both NHP and Acute care admission longer than 3 months. | 63% | Severe carer burden was found to be significantly associated with a shorter time for institutionalisation controlling for ADL rating only HR=1.77; 95CI=1.28-2.44. Carer depression was found to be significantly associated with a shorter time for institutionalisation controlling for ADL rating only HR=1.04; 95 CI=1.01-1.07. | Adjusted for ADL rating only |
| Kodama et al.[[21](#_ENREF_21)]; Japan; 2009 | 2 year cohort | Caregivers of self-care-dependent elderly. 35%. Men: 77 (SD=7), Women: 82 (SD=8). | 1036; 465 (analysis from carers in ‘good’ relationship) | Depression with CES-D. | Institutionalisation | 50% | Carers in a good relationship whose care recipient was admitted to a nursing home (n=54) had a mean CESD score of 5.8 (SD=3.6). Carers who continued caring (n=411) had a mean CESD score of 5.4(SD=3.4). | Unadjusted |
| Kramer.[[22](#_ENREF_22)]; United States; 2000 | 1 year cohort | Dementia dyads. % men not provided. Mean (SD) age not provided. | 74; 57 | Burden with Memory and Behaviour Problem checklist. Depression with CES-D. | Institutionalisation | 48% | Significance difference between carers stress scores in those who did not institutionalise (M=18.98) and those who did (M=25.00; T=-2.23; p=<.05). No significance difference found between carers depression scores in those who did not institutionalise (M=13.65) and those who did (M=15.86; T=0.66) | Unadjusted |
| Kuzuya et al.[[23](#_ENREF_23)]; Japan; 2011 | 3 year cohort | Community dwelling elderly with some degree of physical or mental impairment. 36%. ZBI score 0-15:81 (SD=7.1); score 16-26:81(SD=7.7); score 27-39:81 (SD=7.8). Score 40-84:81(SD=8.5). | 1067; 935 | Zarit burden Interview. | Hospitalisation | 63% | Mean burden scores for those who continued home care was 27.26 (SD=17.12), while those whose CR was admitted to a nursing home was 30.46 (SD=16.9) | Unadjusted |
| Lieberman, Kramer.[[24](#_ENREF_24)]; United States; 1991 | 1 year cohort | Dementia dyads. 36%. 74 (SD=10.2). | 321; 321 | Caregiver stress assessed by the presence or absence of the number of reported family problems associated with caregiving (e.g. financial, psychological and social). | Institutionalisation | 43% | Stress of carers whose care recipient was institutionalised (M=1.9; SD=1.4) was significantly higher than those who remained in the community (M=1.4; SD=1.2; beta=.18; t=2.9; p=.00). | Unadjusted |
| Molloy et al.[[25](#_ENREF_25)]; Canada; 1999 | 3 year cohort | Dementia dyads. 43%. 72 (SD not provided). | 30; 30 | Zarit burden Interview. | Institutionalisation | 60% | Burden score was not predictive of institutionalisation (n admitted=10; n not admitted=20); p=.625). | Unadjusted |
| Nygaard HA.[[26](#_ENREF_26)]; United States; 1991 | 1 year cohort | Dementia dyads. % men not provided.  Admitted: 84 (71-92). Not admitted: 82 (62-93). | 46; 46 | Strain measured on a scale developed for study. | Admitted to a nursing home | 50% | No significance found in strain between those admitted (n=32) and those not admitted (n=14); p=0.7 | Unadjusted |
| Ohwaki et al.[[27](#_ENREF_27)]; Japan; 2009 | 1 year cohort | Elderly people living in the community eligible for care under long-term care insurance. 39%. Mean not provided. 30% aged 65-74; 36% aged 75-84; 34% aged 85. | 244; 244 | Zarit burden Interview. | Placement was to both nursing home and hospital admission. | 58% | There was no significant difference found in burden levels between those who continued home care (n=200) and those who did not (n=44; p=0.91). | Unadjusted |
| Oura et al.[[28](#_ENREF_28)]; Japan; 2006 | 5 year cohort | Frail elderly receiving in-home care. 43%. 81 (SD=8.5). | 122; 113 | Carer depression with CES-D. | Institutionalisation | 35% | Carer depression HR=1.32; 95CI=0.49-3.56. | Adjust for CR characteristics: gender; age; dementia; dementia with behavioural disturbance; Carer characteristics: Gender; age; depression; consulted with a doctor about their own health; spouse; daughter-in-law; Care setting: family member helped with caregiving; able to go out without accompanying the elderly. |
| Philp et al.[[29](#_ENREF_29)]; UK; 1997 | 2 year cohort | Dementia dyads. 2%. 80.7 (66-97). | People with Dementia: 114; 103 | Carer stress assessed by asking the carer to rate their overall level of stress using a 3-category response ('a lot', 'some', and 'hardly and/none'). | Institutionalisation was defined entry to residential or nursing home on a permanent basis; or a long-stay bed in a geriatric or psychiatric hospital | 48% | Carer stress was significantly associated with institutionalisation (to both hospital and NH) p=0.020 (n stressed=40; n not stressed=63; n stressed admitted=24; n not stressed admitted=25). | Unadjusted |
| Pot et al.[[30](#_ENREF_30)]; the Netherlands; 2001 | 1 year cohort | Dementia dyads. 30%. 78 (SD not provided). | 175; 138 | Perceived stress measured with the `Self-Perceived Pressure from Informal Care' questionnaire (SPPIC) [[31](#_ENREF_31)]. Psychological distress with the General Health Questionnaire (GHQ). | Admission to either a residential home or a nursing home. | 65% | There was a significant difference in stress between those whose care recipient remained at home (M=4.53; SD not provided) and those whose care recipient was institutionalised (M=5.52; SD not provided; t= -2.24; p=<0.05). No significance was found between psychological distress of carers whose care recipient remained at home (M=3.90, SD not provided) and those whose care recipient was institutionalised (M=4.61; SD not provided); t= -1.11; p=>.05. | Unadjusted |
| Pruchno et al.[[32](#_ENREF_32)]; United States; 1990 | 1 year cohort | Alzheimer's Disease dyads. % men not provided. Mean (SD) age not provided. | 315; 220 | Burden with a measure derived for the study. Depression with the CES-D. | Institutionalisation | 43% | Significant differences in burden were found between carers whose CR remained in the community (M=32.75) and those who were institutionalised (M=35.85; t=2.86; p=<.01). Significant differences in depression were found between carers whose CR remained in the community (M=14.93) and those who were institutionalised (M=20.16; t=3.16; p=<.01). | Unadjusted |
| Rongve et al.[[33](#_ENREF_33)]; Norway; 2013 | 6 year cohort | Dementia dyads. 45%. 76 (SD=7.7). | 189; 165 | Carer distress with the Relative's Stress Score [[34](#_ENREF_34)]. | Permanent or alternating residing in nursing homes or home for the elderly | 80% | Higher carer distress for those to a nursing home (M=16.3 SD=10.9) than those not admitted (M=14.7; SD=9.7). | Unadjusted |
| Schulz et al.[[35](#_ENREF_35)]; United States; 2004 | 18 month RCT | Dementia dyads. 44%. 79 (SD=8.2). | 1222; 1177 | Carer stress assessed with the Revised Memory and Behaviour Problem Checklist (RMBPC) [[36](#_ENREF_36)]. | Institutionalisation | 63% | Caregivers reporting greater burden were more likely to institutionalise their relative HR=1.02; 95CI=1.01-1.03; P=<.001. | Adjusted for carer race; RMBPC; MMSE; and positive aspects of caregiving. |
| Schwarz, Elman.[[37](#_ENREF_37)]; United States; 2003 | 3 month cohort | Patients with Heart Failure and their carers. 52%. 77 (SD =6.1). | 156; 128 | Perceived stress measured with the Perceived Stress Scale [[38](#_ENREF_38)].  Depression measured with the CES-D. | Hospital readmission | 60% | No significant differences were found in stress scores between those re-admitted to hospital (M=16.18; SD=8.3) and not those re-admitted (M=16.75; SD=9.2; p=.55). No significant differences were found in depression scores between those re-admitted to hospital (M=10.87; SD=8.5) and not re-admitted (M=11.86; SD=9.1; p=.86). | Unadjusted |
| Shugarman et al.[[39](#_ENREF_39)]; United States; 2002 | 3 month cohort | Home Care Support participants. 30%. 75 (SD=11.6). | 527; 527 | Burden measured with items from the MDS-HC [[40](#_ENREF_40)]. | Hospital readmission | 60% | Burdened carers= 106; non-burden carers=421; burdened carers whose recipient was admitted=17; non-burdened carers whose recipient was admitted=67. | Unadjusted |
| Soto et al.[[41](#_ENREF_41)]; France; 2006 | 1 year cohort | Alzheimer's Disease dyads. % men not provided. Mean (SD) age not provided. | 455; 455 | Zarit burden Interview. | Institutionalisation | 58% | The OR for those with moderate Zarit score was OR=1.21; 95 CI=0.46-3.16; p=0.693. | Adjusted for MMSE, living arrangements and Zarit score |
| Spillman, Long.[[42](#_ENREF_42)]; United States; 2009 | 2 year cohort | Older people aged 65+ with chronic disabilities with an established caregiving arrangement. 32%. 80 (SD not provided). | 1006; 1006 | Carer's reports of frequent recipient behaviour problems and of experiencing strain from providing care along with the overall level of stress the caregiver reports experiencing from caregiving responsibilities. | Nursing home entry considered admissions to nursing homes for episodes of care that last at least 60 days | 48% | Stressed carers=191; non-stressed carers=815; stressed carers whose recipient was admitted=33; non-stressed carers whose recipient was admitted=98. | Unadjusted |
| Spruytte et al.[[43](#_ENREF_43)]; Belgium; 2001 | 9 month cohort | Dementia dyads. 31%. 82 (61-94). | 144; 109 | Self-Perceived Pressure from Informal Care [[31](#_ENREF_31)]. | Institutionalisation | 68% | For those admitted N=21; M=39.6; SD=13.4. For those not admitted N=88; M=43.1; SD=9.1. | Unadjusted |
| Stevens et al.[[44](#_ENREF_44)]; United States; 2004 | 2 year cohort | Dementia dyads. 29%. 74 (SD=8.2). | 215; 215 | Burden with Memory and Behaviour Problem Checklist. Depression with CES-D. | Nursing home placement | 60% | Carer stressfulness appraisal of memory and behaviour problems demonstrated significant influence on time to placement ( n admitted=59; n not admitted=156; p=.033). CESD did not demonstrate significant influence on time to placement( n admitted=59; n not admitted=156 p=.68). | Unadjusted |
| Strain et al.[[45](#_ENREF_45)]; Canada; 2003 | 5 year cohort | Older adults diagnosed with cognitive impairment-not dementia or dementia. 49%. 81 (SD not provided). | 123; 123 | Zarit burden Interview. | Institutionalisation | 65% | Carer burden in high risk: OR=1.03 95CI=0.93-1.14. Medium risk, OR=1.03 95CI=0.96-1.10. Low-risk: OR=1.04 95CI=0.97-1.11. | Unadjusted |
| Thorpe et al.[[46](#_ENREF_46)]; United States; 2010 | 1 year cohort | Dementia dyads. % men not provided. 76 (SD=5.3). | 1186; 1186 | Distress with CES-D. | Hospitalisation | 68% | Odds Ratio for CES-D=1.01 95CIs=0.98-1.04. | Unadjusted |
| Voisin et al.[[47](#_ENREF_47)]; France; 2010 | 2 year cohort | Dementia dyads. 30%. 78 (SD=6.82). | 686; 686 | Zarit Burden Interview. | Hospitalisation | 58% | Carer burden score RR=1.016; 95CI=1.008-1.025; p=.0002 | Unadjusted |
| Washio et al.[[48](#_ENREF_48)]; Japan; 2002 | 6 month cohort | Caregivers and the disabled elderly. 40%. 83 (SD=8.7). | 48; 48 | Depression with CES-D. | Admission to long term care institution | 50% | Stressed n=22; n not stressed=26; n stressed admitted=4; n not stressed admitted=3. | Unadjusted |
| Whitlatch et al.[[49](#_ENREF_49)]; United States; 1999 | 2 year cohort | Alzheimer's Disease dyads. % men not provided. 76 (49-97). | 926; 926 | Zarit burden Interview. Depression with CES-D. | Institutionalisation | 55% | Carer burden at baseline was significantly higher for those carers who placed the care recipient (M=19.2) than those who did not (18.0; t=6.92; p<.01). Carer depression at baseline was significantly higher for those carers who placed the care recipient (M=22.3) than those who did not (20.2; t=6.93; p<.01). | Unadjusted |
| Young et al.[[50](#_ENREF_50)]; United States; 1998 | 18 month cohort | Alzheimer's Disease dyads. 35%. 77 (SD not provided). | 575; 426 | Burden measured by 6 item scale developed by the author. | Institutionalisation | 50% | Mean burden scores for those who continued home care (n=261) was 18.8, while those whose CR was admitted to a nursing home (n=165) was 21.7; p=<.01. | Unadjusted |
| Zarit, Todd, Zarit.[[51](#_ENREF_51)]; United States; 1986 | 2 year cohort | Dementia dyads. % men not provided. Husbands with dementia 69 (SD=7.22); Wives with dementia (71 (SD=7.12). | 64; 43 | Zarit burden Interview. | Institutionalisation | 48% | Initial burden scores were significantly higher for those carer who placed their spouse in a nursing home (M=43.54) than those who did not (M=33.59; t=2.23; p<.05). | Unadjusted |
| Gruneir et al.[[52](#_ENREF_52)]; Canada; 2013 | 1 year cohort | Community dwelling dyads. % men not provided. Mean (SD) age not provided. | 71303; 71303 | Carer distress with measure from InterRAI HC assessment [[40](#_ENREF_40)]. | Admission to acute care | 88% | Stressed n=8,720; n not stressed=62,583; n stressed admitted=3,628; n stressed not admitted=22,572. | Unadjusted |
| Baumgarten et al.[[53](#_ENREF_53)]; Canada; 1994 | 1 year cohort | Dementia dyads. 46%. 79 (SD not provided). | 86; 86 | Depression with the CES-D. | Institutionalisation | 53% | Mean CES-D scores for those whose care recipient was institutionalised =15.8 (SD not provided) and those not institutionalise =15.5 (SD not provided). Admitted n=30; n not admitted=56; n stressed admitted=13; n not stressed admitted=17. | Unadjusted |
| Mittelman et al.[[54](#_ENREF_54)]; United States; 2006 | 18 year RCT | Alzheimer's Disease dyads. % men not provided. 74 (SD=8.38). | 406; 406 | Zarit burden Interview. Depression with geriatric depression scale. | Nursing home placement | 53% | The carer burden HR=1.009; 95CI=0.996-1.021; p=0.1759. The carer depression HR=1.016; 95CI=0.988-1.044; p=0.2791 | Adjusted for group (intervention vs control); carer gender; carer age; patient age; patient income; year of study entry; global deterioration scale; carer physical health; patient physical health; satisfaction with support network; frequency of memory and behaviour problems; reaction to memory and behaviour problems; depressive symptoms and carer burden. |
| Nobili et al.[[55](#_ENREF_55)]; Italy; 2004 | 12 month RCT | Dementia dyads. % men in control=41%; intervention=40%. Control=75 (SD=10); Intervention=74 (SD=9). | 69; 55 | carer stress measured with relative stress scale (RSS) [[34](#_ENREF_34)]. | Institutionalisation | 65% | The mean stress score of those whose care recipient was institutionalised M= 36 (SD=8), for those whose care recipient was not institutionalised M=26 (SD=11). | Unadjusted |
| Spijker et al.[[56](#_ENREF_56)]; Netherlands; 2011 | 12 month RCT | Suspected Dementia dyads. %men in control=36%; % men intervention=30%. Control=80 (SD=6.4); Intervention=80 (SD=7.1). | 295; 262 | Carer depression CES-D. | Institutionalisation in long-term care facilities. | 80% | Log regression, carer depression OR=1.05; 95% CI=1.01-1.09; p=0.01. | Adjusted for group assignment (intervention vs control); gender; living arrangement; severity of dementia; sense of competence; behavioural problems; carer depressive symptoms; group assignment x sense of competence; gender x living arrangement |
| Joling et al.[[57](#_ENREF_57)]; The Netherlands; 2012 | 18 month RCT | Dementia dyads. 67%. 77 (SD=8.3). | Control group: 96; 95 | Neuropsychiatric Inventory Questionnaire (NPI-Q) distress score. Depression measured with CES-D. | Institutionalisation | 78% | Admitted n=18; n not admitted=77. Carer distress admitted M=14.7; SD=7.6; not admitted M=12.1; SD=9.6. Carer depression admitted M=12.8 SD=5.5; not admitted M=10.3; SD=7.4. | Unadjusted |
| Phung et al.[[58](#_ENREF_58)]; Denmark; 2013 | 3 year RCT | Alzheimer's Disease dyads. 45%. 76 (SD=6.6). | Control group: 167; 167 | Depression measured with Geriatric depression scale. | Nursing home placement | 80% | Admitted n=48; M=4.38; SD=5.3. Not admitted n=119; M=4.84; SD=4.9. | Unadjusted |
| Wai Tong, Lee.[[59](#_ENREF_59)]; China; 2011 | 18 month RCT | Dementia dyads. 56%. 69 (SD=6.8). | Control group: 46; 45 | Family Caregiving Burden Inventory (FCBI). | Institutionalisation | 93% | Stressed n=25; n not stressed=13; n stressed admitted=18; n not stressed admitted=9. | Unadjusted |
| Wang, Chien.[[60](#_ENREF_60)]; China; 2011 | 7 month RCT | Dementia dyads. 54%. 68 (SD=7.9). | Control group: 40; 40 | Family Caregiving Burden Inventory (FCBI). | Institutionalisation | 80% | Burdened carers= 20; non-burden carers=19; burdened carers whose recipient was admitted=13; non-burdened carers whose recipient was admitted=8. | Unadjusted |
| Droes et al.[[61](#_ENREF_61)]; The Netherlands; 2006 | 18 month non randomised pre and post-test design | Dementia dyads, % men not provided. Mean (SD) age not provided. | Control group: 34; 18 | General Health Questionnaire (GHQ-28). | Nursing home placement | 50% | Admitted n= 5; M=34.6; SD=17.97; not admitted n=13; M=29; SD=17.9. | Unadjusted |
| Kurz et al.[[62](#_ENREF_62)]; Austria, Switzerland and Germany; 2010 | 15 month RCT | Alzheimer's Disease dyads. 32%. 76 (SD not provided) | Control group: 132; 106 | Montgomery-Asberg Depression Scale. | Permanent nursing home placement | 73% | Admitted n= 12; M=11.00; SD=9.24; not admitted n=94; M=11.15; SD=8.87.. | Unadjusted |

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