

# Supplementary Material

## Anger and Dementia Caregiving: A Systematic Review of the Effects of Anger and Hostility on Caregivers' Physical Health

### Supplementary Figure 1. Search terms using OVID-Embase

1. \*anger/
2. exp anger/
3. anger\*.mp.
4. anger expression\*.mp.
5. anger express\*.mp.
6. anger outburst\*.mp.
7. anger trait\*.mp.
8. angry\*.mp.
9. \*hostility/
10. exp hostility/
11. hostility\*
12. hostile\*
13. \*aggression/
14. exp aggression/
15. aggression\*
16. aggressive\*
17. aggressive behaviour\*
18. aggressive behavior\*
19. aggressiveness\*
20. rage/
21. \*rage/
22. rage\*
23. resent\*
24. resentment\*
25. hostility subscale\*
26. State traits anger inventory.mp.
27. \*annoyance/
28. exp annoyance/
29. annoyance\*
30. 1 or 2 or 3 or 4 or 5 or 6 or 7 or 8 or 9 or 10 or 11 or 12 or 13 or 14 or 15 or 16 or 17 or 18 or 19 or 20 or 21 or 22 or 23 or 24 or 25 or 26 or 27 or 28 or 29
31. exp dementia/
32. \*dementia/
33. dementia\*.mp.
34. exp alzheimer disease/
35. \*alzheimer disease/
36. alzheimer disease.mp.
37. alzheimer's Dementia\*.mp.
38. Dementia with Lewy Bod\*

39. Lewy Body Dementia\*.m.
40. Lewy bodies Dementia\*.mp.
41. exp frontotemporal dementia/
42. frontotemporal dementia/
43. frontotemporal dementia\*.mp.
44. exp frontal variant frontotemporal dementia/
45. \*frontal variant frontotemporal dementia/
46. frontal variant frontotemporal dementia\*.mp.
47. 31 or 32 or 33 or 34 or 35 or 36 or 37 or 38 or 39 or 40 or 41 or 42 or 43 or 44 or 45 or 46
48. exp caregiver/
49. \*caregiver/
50. caregiver\*
51. carer\*
52. care-giv\*
53. caregiv\*
54. exp spouse/
55. \*spouse/
56. spouse.mp.
57. exp wife/
58. \*wife/
59. wife\*.mp.
60. exp husband/
61. \*husband/
62. husband\*.mp.
63. exp child/
64. \*child/
65. child\*.mp.
66. children.mp.
67. exp son/
68. \*son/
69. son\*.mp.
70. exp daughter/
71. \*daughter/
72. daughter\*.mp.
73. exp relative/
74. \*relative/
75. relative\*.mp.
76. kinship\*.mp.
77. dependent\*.mp.
78. informant\*.mp.
79. informal carer\*.mp
80. informal caregiving\*.mp.
81. informal caregive\*.mp
82. 51 or 52 or 53 or 54 or 55 or 56 or 57 or 58 or 59 or 60 or 61 or 62 or 63 or 64 or 65 or 66 or 67 or 68 or 69 or 70 or 71 or 72 or 73 or 74 or 75 or 76 or 77 or 78 or 79 or 80 or 81
83. 30 and 47 and 82

**Supplementary Table 1. Quality and risk of bias assessment tool**

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**QUALITY AND RISK OF BIAS ASSESSMENT SCALE**

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**I. Selection**

**1) Representativeness of the sample**

- a) Truly representative of the population; good sample size and power calculation provided (\*\* stars)
- b) Somewhat representative of the population; acceptable sample size but power calculation not provided (\* star)
- c) No description of the derivation of the sample/cohort or small sample size (no star)

**2) Measurement tool for anger/hostility**

- a) Specific instrument used to assess outcome of interest (i.e., anger and hostility) (\* star)
- b) Generic tool used to assess outcome of interest (i.e., non-specific psychological distress scale for anger) (no star)

**3) Measurement tool for physiological measures/markers**

- a) Measurement was performed according to “gold standard” (e.g., using sphygmomanometer to measure blood pressure) (\* star)
- b) Measurement deviated from “gold standard” without explanation (e.g., no fasting was done prior to measuring glucose) (no star)

**II. Confounders**

**1) Where confounding factors included in design or analysis?**

- a) Over two confounders assessed (\*\* stars)
- b) Only one confounder assessed (\* star)
- c) no confounders were assessed (no star)

**III. Outcome and results**

**1) Statistics**

- a) Results reported in detail/reporting of a correlation coefficient or equivalent and a related confidence interval (CI) and/or associated p-value (\* star)
- b) Poor quality of reporting/no correlation coefficient or equivalent and associated CI (no star)

**2) Was follow-up long enough for outcomes to occur (longitudinal studies)**

- a) Yes (over 6 months); or retrospective design (\* star)
- b) No (less than 6 months) (no star)

**3) Adequacy of follow up of cohorts**

- a) Complete follow up - all subjects accounted for (\*\* stars)
- b) Participants lost to follow up unlikely to introduce bias - number lost less than/equal to 20% or description of those lost suggested no difference from those completing follow-up; or retrospective study (\* star)
- c) Follow up rate less than 80% and no description of those lost (no star)

**Total scoring**

**Selection: /4 stars    Confounders: /2 stars    Outcome and results: /4 stars**

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**Good quality:** >3 stars in selection domain AND >1 star in confounders domain AND >2 stars in outcome and results domain

**Fair quality:** 2 stars in selection domain AND >1 star in confounders domain AND >2 stars in outcome and results domain

**Poor quality:** ≤1 star in selection domain OR 0 stars in confounders domain OR ≤1 star in outcome and results domain

**Supplementary Table 2** Excluded studies with reasons

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<b>Study</b>	<b>Reason</b>
Coon (2003)	did not examine the association between caregiver anger and physical health
Hosaka (2003)	did not examine the association between caregiver anger and immune system responses/physical health
Shaw (1998)	duplicate study with Shaw 2003
Shaw (1999)	duplicate study with Shaw 2003
Vitaliano (1993)	experimental study of anger control
Vitaliano (1995)	experimental study of anger control
Wilcox (2000)	experimental study of anger control
Zhang (2001)	duplicate study with Vitaliano 1995

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