

Sociale steun

Een vergeten aangrijpingspunt voor preventie van cognitieve achteruitgang & dementie?

Richard Oude Voshaar
Preventieve GGZ van vroeg tot later
RGOc, 13-12-2016

Voorspellen ziekte last van Alzheimer dementie¹

Table 2
Impact of interventions on worldwide prevalence of Alzheimer's disease*

Intervention scenario	Mean delay (in years)		Change in worldwide prevalence (in millions)		
	Onset	Progression	Overall	Early-stage	Late-stage
A	2	0	-22.76	-12.28	-10.48
B	1	0	-11.76	-6.32	-5.44
C	0	2	+5.23	+12.14	-6.91
D	0	1	+2.84	+6.54	-3.70
E	2	2	-18.48	-2.66	-15.82
F	1	1	-9.19	-0.48	-8.71

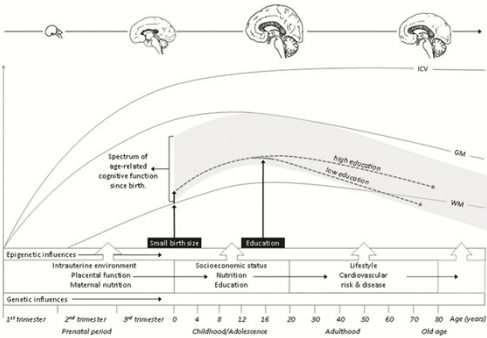
¹ Brookmeyer et al, Alzheimer's & Dementia 2007

Disclosure



- No conflicts of interest (but still working on.....)

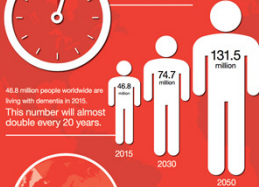
Levensloop perspectief op hersenveroudering¹



¹ Muller et al, 2014

The global impact of dementia

Around the world, there will be 9.9 million new cases of dementia in 2015, one every 3 seconds



68% 2050
Much of the increase will take place in low and middle income countries. In 2015, 56% of all people with dementia live in LMICs, rising to 63% in 2030 and 65% in 2050.

US\$ 818 billion 2015
US\$ 1 TRILLION 2018
US\$ 2 trillion by 2030
The total estimated worldwide cost of dementia in 2015 is US\$ 818 billion. By 2018, dementia will become a trillion-dollar disease, rising to US\$ 2 trillion by 2030

If global dementia care were a country, it would be the 18th largest economy in the world, exceeding the market value of companies such as Apple and Google
Dementia \$818 billion
Apple \$562 billion
Google \$306 billion
Source: World Bank, 2015



New Insights into the Dementia Epidemic

Eric B. Larson, M.D., M.P.H., Kristine Yaffe, M.D., and Kenneth M. Langa, M.D., Ph.D.

Selected Recent Studies of the Dementia Epidemic				
Study	Outcome	Data Source	Key Findings	Factors
Manton et al. (United States) ¹	Prevalence of severe cognitive impairment	National long-term care survey interviews, 1982–1999	Decline in dementia prevalence among people ≥65 yr of age (5.7% to 2.9%)	Higher educational level, decline in stroke incidence
Langa et al. (United States) ²	Prevalence of cognitive impairment	Ongoing population-based survey of people ≥51 yr of age	Prevalence of cognitive impairment among people ≥70 yr of age (12.2% in 1993 vs. 8.7% in 2002)	Higher educational level; combination of medical, lifestyle, demographic, and social factors
Schrijvers et al. (Rotterdam) ³	Incidence of dementia	Population-based cohort ≥55 yr of age in 1990, extended in 2000	Incidence rate ratios (6.56 per 1000 person-yr in 1990 vs. 4.92 per 1000 person-yr in 2000)	Higher educational level, reduction in vascular risk, decline in stroke incidence
Qiu et al. (Stockholm) ⁴	Prevalence of DSM-III-R dementia ^a	Cross-sectional survey of people ≥75 yr of age, 1987–1989 and 2001–2004	Age- and sex-standardized dementia prevalence (17.5% in 1987–1989 vs. 17.9% in 2001–2004); lower hazard ratio for death in later cohort suggests decreased dementia incidence	Favorable changes in risk factors, especially vascular risk; healthier lifestyles
Matthews et al. (England) ^{5†}	Prevalence of dementia in 3 regions	Survey interviews of people ≥65 yr of age, 1989–1994 (in CFAS I) and 2008–2011 (in CFAS II)	Dementia prevalence (8.3% in CFAS I vs. 6.5% in CFAS II)	Higher educational level, better prevention of vascular disease

	Prevalentie (%)	PAR (%)	Attributieve casus (n)
• Diabetes Mellitus	6.9	3.1	222 000
• Hypertensie (middelbare leeftijd)	12.0	6.8	492 000
• Obesitas (middelbare leeftijd)	7.2	4.1	299 000
• Fysieke inactiviteit	31.0	20.3	1 461 000
• Depressie	18.5	10.7	774 000
• Roken	26.6	13.6	978 000
• Laag opleidingsniveau	26.6	13.6	978 000
Gecombineerd	-	52.0	3 891 000
Gecorrigeerd gecombineerd	-	30.0	3 033 000

² Norton et al. *Lancet Neurology* 2014

1. 'Use it or lose it'
2. Cognitieve reserve
3. Stress reductie
4. Stimulans voor een gezondheidsbevorderende levensstijl

J Daubhson Nurs Ment Health Sci 2016 Mar;54(3):25-9. doi: 10.1080/027703695.20160219.04

Can Declining Rates of Dementia Be Explained by the Increased and Widespread Use of Psychotropic Medications?

Howard R.

Abstract

Abstract. Dementia, once described as the "silent epidemic," is now well known and greatly feared. Although the total number of dementia cases will increase worldwide because of increased life expectancy, eight population-based studies of dementia incidence or prevalence have revealed a declining age-specific rate in the United States and Europe during the past three decades. Many different psychotropic drugs have been introduced since the mid-1950s, and their clinical use has broadened and increased dramatically over time. Antipsychotic drugs, second-generation antipsychotic drugs, lithium, valproate, carbamazepine, lamotrigine, electroconvulsive therapy, and exercise have all been found to activate or regulate various intracellular neurotrophic and neuroprotective processes. They promote neurogenesis and are protective in models of neurodegenerative diseases and ischemia. Because of their neurotrophic and neuroprotective effects, the widespread use of psychotropic drugs provides a plausible explanation for declining rates of dementia that have been observed.

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PMID: 26935187 DOI: 10.3928/02793695-20160219-04

Dr. Anna M. K. van Erp

The importance of social relationships in the process of cognitive ageing

- | | |
|-----|--|
| H-2 | Meta-analyse sociale relaties & dementia ¹ |
| H-3 | Meta-analyse sociale relaties & cognitieve achteruitgang ² |
| H-4 | Lifelines sociale relaties & subjectieve geheugenklachten ³ |

¹ Kuipers, Oude Voshaar, et al, Ageing Res Review 2015

² Kuipers, Oude Voshaar, et al, *Int J Epidemiol* 2016

³ Kuipers, Oude Voshaar, et al, Int J Geriatr Psychiatry 2016

Beschützt tegen:

- **Depressie** (Santini et al, 2014)
- **Coronaire hartziekten** (Hemmingway & Marmot, 2011)
- **Functionele achteruitgang** (Avlund et al, 2004)
- **Mortaliteit** (Holt-Lunstad et al, 2010)

An active and socially integrated lifestyle in late life might protect against dementia

© 2000 Blackwell Science Ltd *Journal of Internal Medicine* 247: 391–397

Life expectancy, life expectancy at birth, and length of life expectancy

There are a number of different ways to derive and use life expectancy. The most common is life expectancy at birth. This review summarizes the different ways to derive and use life expectancy, and the different ways to use life expectancy to estimate the effect of social network, physical factors, and nonphysical factors on life expectancy. The review also summarizes the different ways to use life expectancy to estimate the effect of social network, physical factors, and nonphysical factors on life expectancy. The review also summarizes the different ways to use life expectancy to estimate the effect of social network, physical factors, and nonphysical factors on life expectancy.

Life expectancy (as survival) and life expectancy at birth

There is a large amount of epidemiological data on life expectancy. This review summarizes the different ways to derive and use life expectancy, and the different ways to use life expectancy to estimate the effect of social network, physical factors, and nonphysical factors on life expectancy. The review also summarizes the different ways to use life expectancy to estimate the effect of social network, physical factors, and nonphysical factors on life expectancy.

Social networks

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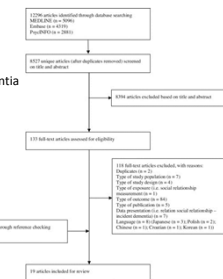
**WAAROM
MOEILIK DOEN
ALS
HET SAMEN KAN**

Loesje

- **Structurele aspecten:**
 - Aantal sociale contacten
 - Sociale activiteiten
- **Kwalitatieve aspecten:**
 - Mate van sociale steun
 - Fenzaamheid

Sociaal functioneren en ontstaan dementia¹

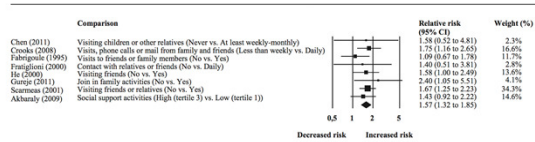
- Meta-analyse (PRISMA guidelines)
- Zoekstrategie
 - Social relationships (meerdere termen) & dementia
- Specifieke analyse voor:
 1. Social network size
 2. Social participation
 3. Frequency of social contacts
 4. Loneliness
 5. Satisfaction with social network
 6. Other social relationships



¹ Kuipers, Oude Voshaar, et al, Ageing Res Review 2015

Resultaten: Frequentie van sociale contacten¹

9 studies: 8 studies in de meta-analyse: **RR = 1.57** [1.32 – 1.85]



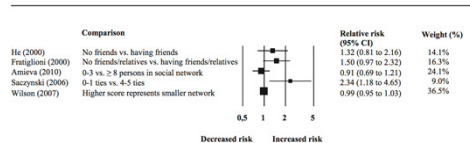
Heterogeneity: $\chi^2=3.79$, $df=7$, $p=0.80$, $I^2=0\%$

Fig. 4. Forest plot of frequency of social contact and risk of incident dementia.

¹ Kuipers, Oude Voshaar, et al, Ageing Res Review 2015

Resultaten: Grootte van het sociale netwerk¹

8 studies: 5 studies in de meta-analyse: te heterogeen om te poolen



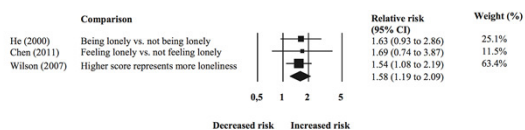
Heterogeneity: $\chi^2=11.05$, $df=4$, $p=0.03$, $I^2=64\%$

Fig. 2. Forest plot of social network size and risk of incident dementia.

¹ Kuipers, Oude Voshaar, et al, Ageing Res Review 2015

Resultaten: Eenzaamheid¹

4 studies: 3 studies in de meta-analyse: **RR = 1.58** [1.19 – 2.09]



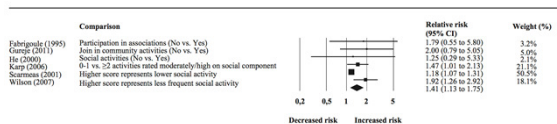
Heterogeneity: $\chi^2=0.06$, $df=2$, $p=0.97$, $I^2=0\%$

Fig. 5. Forest plot of loneliness and risk of incident dementia.

¹ Kuipers, Oude Voshaar, et al, Ageing Res Review 2015

Resultaten: Sociale participatie¹

8 studies: 6 studies in de meta-analyse: **RR = 1.41** [1.13- 1.75]



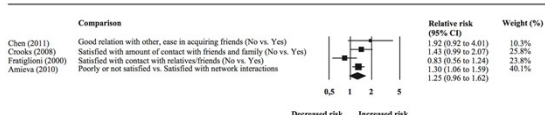
Heterogeneity: $\chi^2=7.27$, $df=5$, $p=0.20$, $I^2=31\%$

Fig. 3. Forest plot of social participation and risk of incident dementia.

¹ Kuipers, Oude Voshaar, et al, Ageing Res Review 2015

Resultaten: Tevredenheid met het sociale netwerk¹

4 studies: 4 studies in de meta-analyse: **RR = 1.25** [0.96 – 1.62]



Heterogeneity: $\chi^2=5.95$, $df=3$, $p=0.11$, $I^2=49\%$

Fig. 6. Forest plot of satisfaction with social network and risk of incident dementia.

¹ Kuipers, Oude Voshaar, et al, Ageing Res Review 2015

Conclusie m.b.t. dementie

- Beperkt sociaal functioneren voorspelt ontstaan dementie
 - Effect-size (RR) 1.41 Sociale participatie
 - 1.57 Frequentie sociale contacten
 - 1.58 Eenzaamheid
 - 1.25 Tevredenheid sociale netwerk
- Effect-size vergelijkbaar met gevestigde risicofactoren:
 - Effect-size (RR) 1.85 Depressie¹
 - 1.82 Fysieke inactiviteit²
 - 1.61 Hoge bloeddruk op middelbare leeftijd²
 - 1.59 Laag opleidingsniveau³
 - 1.57 Diabetes Mellitus³
 - 1.37 Roken⁴

¹ Dinic et al Br J Psychiatry 2013² Norton et al, Lancet Neurology 2013³ Vagelatos et al, Int Epidemiol 2013⁴ Beydoen et al, BMC Public Health 2014

Sociaal functioneren en cognitieve achteruitgang

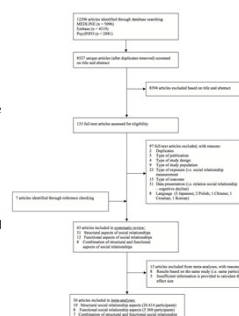
- Cognitieve achteruitgang is domein specifiek:
 - Vanaf middelbare leeftijd achteruitgang in:
 - Snelheid van informatieverwerking
 - Executieve functies
 - Geheugen
 - Relatief gespaard worden:
 - Verbale functies
 - Algemene kennis
- Achteruitgang meer dan gemiddeld: Mild Cognitive Impairment

Maar: Reverse causality?

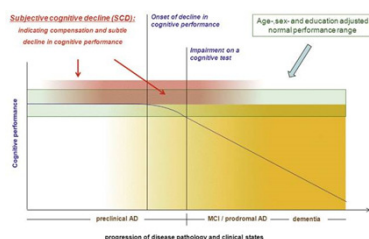


Sociaal functioneren en cognitieve achteruitgang¹

- Meta-analyse (PRISMA guidelines)
- Zoekstrategie
 - Social relationships & cognitive decline
- Specifieke analyse voor:
 1. Structurele sociale relatie
 2. Functionele sociale relaties
 3. Combinatie structureel & Functioneel

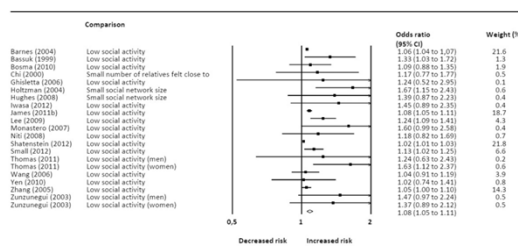
¹ Kuipers, Oude Voshaar, et al, Int J Epidemiol 2016

Cognitieve achteruitgang bij de ziekte van Alzheimer¹

¹ Jessen et al, Alzheimers Dement 2014

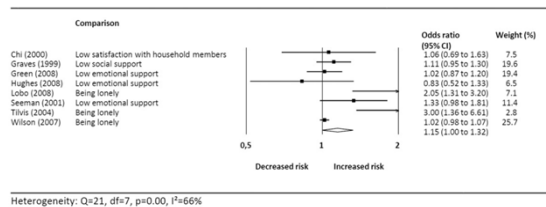
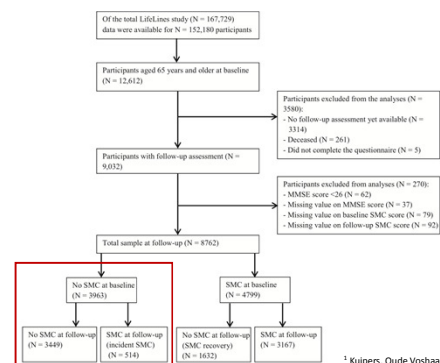
Resultaten: Structurele sociale contacten¹

31 studies: 19 studies in de meta-analyse

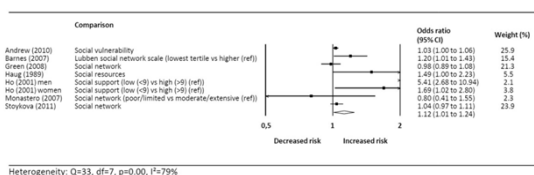
Heterogeneity: Q=66, df=20, p=0.00, I²=70%¹ Kuipers, Oude Voshaar, et al, Int J Epidemiol 2016

Resultaten: Functionele sociale contacten¹

12 studies: 8 studies in de meta-analyse

¹ Kuipers, Oude Voshaar, et al, Int J Epidemiol 2016lifelines Subjectieve geheugenklachten¹¹ Kuipers, Oude Voshaar, et al, Int J Geriatr Psychiatry 2016Resultaten: Structurele & functioneel gecombineerd¹

8 studies: 7 studies in de meta-analyse

¹ Kuipers, Oude Voshaar, et al, Int J Epidemiol 2016lifelines Variabelen¹

- Subjectieve geheugenklachten:
 - Heeft u geheugenklachten?
- Sociaal functioneren:
 - Stabiele partnerrelatie
 - Aantal personen in het huishouden
 - Grootte sociaal netwerk (0-5 versus >5)
 - Sociale activiteiten
 - Kwaliteit sociale relaties
 - Sociale steun
 - Sociale productie functie theorie (SPT-IL) (affectie, gedragsbevestiging, status)

¹ Kuipers, Oude Voshaar, et al, Int J Geriatr Psychiatry 2016Conclusie m.b.t. cognitieve achteruitgang¹

Sociale relaties voorspellen cognitieve achteruitgang:

- Kanttekening: veel heterogeniteit
 - Aard sociale relatie (structureel – functioneel) verklaart een gedeelte
 - Cognitie m.n. gemeten m.b.v. MMSE dan wel dichotoom (MCI)
- Reverse causality, kan, maar minder waarschijnlijk omdat meta-regressie:
 - geen effect toont van wel/niet excluderen MCI of dementie
 - geen effect toont van duur follow-up

¹ Kuipers, Oude Voshaar, et al, Int J Epidemiol 2016lifelines resultaten na 1.5 jaar FU¹

514 / 3963 (13%) incidente subjectieve geheugenklachten

	OR [95% B.I.]*	P-value
Baselinewaarde:		
Betere gevoelens van affectie	0.9 [0.8 – 1.0]	.01
Betere gedragsbevestiging	0.9 [0.8 – 1.0]	.02
Verandering t.o.v. baseline:		
Verlies partnerrelatie	2.0 [1.0 – 4.0]	.06
Voldoende sociale steun (vs onvoldoende)	0.5 [0.3 – 1.0]	.04

* Logistische regressie, gecorrigeerd voor leeftijd, geslacht, opleiding, fysieke Activiteit, alcoholgebruik, roken, depressie, cerebrovasculaire & cardiovasculaire ziekten

¹ Kuipers, Oude Voshaar, et al, Int J Geriatr Psychiatry 2016

Eindconclusies^{1,2,3}

- Sociaal functioneren belangrijke risicofactor voor:
 - Subjectieve geheugenklachten
 - Versnelde cognitieve achteruitgang
 - Mild Cognitive Impairment
 - Dementie
- Vertraging ontstaan dementie met 2 jaar: 22.800.000 minder patiënt!
- Preventie van dementie ook in het sociale domein!

¹ Kuipers, Oude Voshaar, et al, Ageing Res Review 2015

² Kuipers, Oude Voshaar, et al, Int J Epidemiol 2016

³ Kuipers, Oude Voshaar, et al, Int J Geriatr Psychiatry 2016