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## Caffeine: a cup of care? An exploration of the relation between caffeine consumption and behavioral symptoms in persons with dementia

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**Author:** Kromhout-Wegewijs, M.A.

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A large, bold, black letter 'D' is centered on the page. It has a thick, solid black outline and a white interior. The letter is positioned above the word 'DANKWOORD'.

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**DANKWOORD**

Isaac Newton schreef aan Robert Hooke in 1675 “if I have seen further it is by standing on the shoulders of giants.” Bij mijn promotietraject heb ik van vele schouders gebruik mogen maken. Hoewel mijn naam op het proefschrift staat zijn er velen zonder wiens kennis, steun en aanmoediging dit proefschrift niet geschreven was. Dank aan iedereen op wiens schouders ik heb mogen staan, op wiens schouders ik heb mogen leunen en aan hen die me geholpen hebben de schouders op te halen.

Dank aan mijn promotieteam. Prof.dr.W.P.Achterberg, eerste-promotor: Beste Wilco, als collega SO stimuleerde je de nieuwsgierigheid in een jonge SO. Uit die nieuwsgierigheid is (jaren later) dit proefschrift is ontstaan. Dank voor het vertrouwen, de kansen die je hebt gecreëerd, je wijsheid en begeleiding. Ik kan me geen prettigere eerste-promotor voorstellen.

Prof.dr.M.E.Numans, promotor: Beste Mattijs, dank voor onze gesprekken en je perspectief, zowel op dit onderzoek als op de rest van mijn werkzaamheden.

Dr.N.Rius-Ottenheim, co-promotor: Beste Nathaly, bij jou kon ik terecht voor antwoorden op praktische vragen, voor nuanceringen en overwegingen. Dank voor waardevolle feedback, ik keek er iedere keer weer naar uit.

Zonder de aan de onderzoeken deelnemende mensen met dementie en hun vertegenwoordigers, de verzorgenden van Zorgspectrum en de aios specialisme ouderengeneeskunde in Leiden, waren deze onderzoeken niet mogelijk geweest. Dank voor jullie betrokkenheid en inzet. Ik hoop dat de conclusies bijdragen aan een betere kwaliteit van leven en goede koffie.

Tijdens het promotietraject heb ik veel vragen gesteld, zowel inhoudelijk als procedureel. Dank aan de collega docenten en onderzoekers, Joran Jongerling, Linda Breeman en anderen voor het beantwoorden van mijn vragen en het stellen van nog meer vragen. En dank aan José Tielman-Shamier, die mogelijkheden zag in agenda's waar alleen maar overlap zichtbaar was.

Maxim Veen, Joost Leopold, Wilco Admiraal en andere barista's hebben me geleerd dat er zoveel meer in koffie zit en er zoveel (smaak)nuance mogelijk is, als je weet welke factoren je kan beïnvloeden. Dank voor de verdieping in iets alledaags.

Onder het genot van vele goede koppen koffie hebben Maaike de Jong, Stefan van Osch, Bastiaan Smit, Jantine van den Bosch, Erik van Tulder en Linda Breeman geluisterd, gerelativeerd en genuanceerd. Jullie schouders heb ik nodig gehad en gewaardeerd.

Dank aan mijn ouders en grootouders, jullie zijn reuzen.

Pepijn, dank voor het samen delen van onze schouders.

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# **CURRICULUM VITAE**

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Michelle Angelique Wegewijs was born on August 20<sup>th</sup>, 1983 in Helmond, the Netherlands. She graduated cum laude at Dr. Knippenberg College in 2001. After completing her Ms in Medicine at the University of Utrecht in 2007, Michelle specialized as an elderly care physician (ECP) at Gerion in Amsterdam and continued to specialize by additional training on people with dementia and behavioral symptoms.

Good health is more than an absence of disease. Good healthcare does not focus exclusively on treating the disease but involves the whole person and contributes to the (highest attainable) quality of life, with or without disease.

As an ECP she used a holistic, multidisciplinary approach: taking both the context and person into account to realize a best possible quality of life together with the person and team. Besides her employment as an ECP she followed a second career path, first as project and program manager at SOON, later as deputy head of the ECP training program at the Leiden University Medical Center. This second path was also characterized by the holistic approach.

In 2018, she combined these two career paths into one and started as a business consultant in elderly care to realize the (organizational) conditions necessary for a good quality of care. Instead of treating behavioral symptoms with a multidisciplinary team, she now helps to solve all kinds of problems and creatively builds solutions to unblock bottlenecks. Just like the treatment of behavioral symptoms, she does not jump to a solution, but first takes a careful look and analyzes at what is really going on after which the best possible solution is chosen together.

Besides solving problems and finding solutions, Michelle enjoys walking, cycling, hiking, reading, cooking, baking, creating all kinds of things and changing things for the better.

She is married to Pepijn.

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**PORTFOLIO**

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### **Mandatory PhD courses**

|      |   |
|------|---|
| 2018 | Basic course on regulations and organization of clinical trials (eBrok), NFU  |
| 2017 | PhD Introductory Meeting  |
| 2016 | Basic Methods and Reasoning in Biostatistics (exempted because of the e-learning Practical Biomedical Statistics (Chapter 1-10), AMC) |

### **Selection of professional qualifications and courses**

|           |  |
|-----------|--|
| 2020      | Writing with flair, Udemy  |
| 2020      | Writing a bestselling novel (writing mastery), Udemy                           |
| 2017      | Drawing for meetings, presentations and trainings, Udemy                       |
| 2017      | Writing with Impact: writing that persuades' Clare Lynch, Cambridge University |
| 2017-2018 | Upcycling of Leadership, Double Heelix LEAD                                    |
| 2017      | Governance - Population Health Management, LUMC                                |
| 2017      | MBA in one day, Ben Tiggelaar  |
| 2017      | Designing e-learning for Health, University of Nottingham (Futurelearn)        |
| 2017      | SCAE Brewing Foundation, Koffieschool  |
| 2016      | SCAE Barista Skills Foundation, Koffieschool                                   |
| 2013      | Test design: constructing and using test matrixes, Uitgevers Academie          |
| 2013      | General Instructors Course, SBOH en Plato                                      |
| 2012-2013 | Designing multiple choice questions, Uitgevers Academie                        |
| 2008-2009 | Interprofessional course in geriatric psychiatry, Altrecht                     |
| 2007      | Passivities of daily living in persons with dementia (Pdl), Zorgspectrum       |
| 2007      | Introduction to work- and organizational psychology, Open Universiteit         |
| 2006      | Organization and Management, Open Universiteit                                 |

### **Teaching experience**

|              |   |
|--------------|---|
| 2018-2020    | Supervising medical students and ECPs in the writing of a CAT, LUMC   |
| 2017-2018    | Teacher at the management training' Policy and management' for GPs, LUMC  |
| 2017         | College on elderly care at BsC Medicine, LUMC   |
| 2016-present | Guest teacher, Master of Advanced Nurse Practitioner, Hogeschool Utrecht  |
| 2014-present | Several classes on behavioral symptoms, dementia and leadership for the ECP training program, LUMC  |
| 2014-2018    | Various educational activities as deputy head of the ECP training program, e.g. teaching, educational development, quality of education, educational innovation and interdisciplinary collaboration, LUMC |

## Research history

- 2014-present The relation between caffeine and behavioral symptoms in persons with dementia, under supervision of prof.dr.W.P.Achterberg and prof.dr.M.E.Numans, LUMC
- 2007-2014 Several CATs (unpublished)
- 2007 Sexological dysfunction in women with pelvic floor problems, under supervision of dr. C.H. van der Vaart
- 2006-2007 Baseline study for the project "accessible night and weekend help for mental health care clients", commissioned by Platform GGz Utrecht, Primair Huisartsenposten and Altrecht, under the supervision of Dr. ME Van Baar and prof.dr. A.J.P. Schrijvers
- 2006 Review into hypothermia as an adverse effect of antipsychotic drug use, under supervision of dr. R.J. van Marum

## Employment history

- 2019-present Managing consultant, P5COM
- 2018-present Consultant, trainer and project manager, Tolokku
- 2017-2018 Project manager/ coordinator of the management training 'Leadership & organization' for elderly care physicians (ECP), LUMC
- 2017-2019 Advisor to the board, Double Healix Educational Media
- 2014-2018 Deputy and substitute head of the ECP training program, responsible for educational innovation and quality, national and local educational development, LUMC
- 2013-2016 Projectmanager 'multiple choice testing', Samenwerkende Opleidingen Ouderengeneeskunde Nederland (SOON)
- 2012-2016 Elderly care physician, Zorgspectrum
- 2011-2014 Program manager STAR(t)class, SOON
- 2011-2012 Elderly care physician, Gerimedica Aveant
- 2011 Interim (temporarily extra support after a fire) Elderly care physician, Zorgspectrum
- 2010-2011 Elderly care physician, Stichting de Rijnhoven
- 2007-2010 Trainee elderly care physician, SBOH
- 1999-2004 Various side jobs, including on-call care worker in a nursing home

## Professional service

- 2021-present Vice president of guideline commission 'sleep disturbances in elderly persons', SKILZ
- 2018-present Editor in chief of Socares (journal and e-learning for professionals in elderly care)

|           |  |
|-----------|--|
| 2016-2019 | Commission member ‘toekomstbestendige competenties’, Verenso project ‘SO 2020’   |
| 2012-2016 | Member of the expert team on behavioral symptoms, Zorgspectrum   |
| 2010-2017 | Member of guideline commission “dying in nursing homes”, with representatives of the police, justice department and elderly care |

## **Education**

|           |   |
|-----------|---|
| 2017      | Grand for realization of an innovative educational improvement by using VR360 in classes on behavioral symptoms in persons with dementia, Centre-4Innovation.   |
| 2016      | Basic education qualification (BKO), LUMC.  |
| 2014-2016 | Psychogeriatrics management training (kaderopleiding Psychogeriatrie), Gerion.  |
| 2012      | Nutritionist, Civas.  |
| 2010-2013 | Natural nutritionist, Kraaybeekerhof Academy.   |
| 2007-2010 | Eldely care physician, Gerion.  |
| 2001-2007 | Bsc and Ms in Medicine, Utrecht University. Elective courses: Organization and Management (policy staff UMC Utrecht); nursing home medicine; rehabilitation (Military Rehabilitation Centre); medicine in developing countries. |
| 1995-2001 | Cum laude High School A-level, Dr. Knippenberg College.   |

## **Publications in peer reviewed journals in this thesis**

|      |   |
|------|---|
| 2020 | “Caffeine consumption and behavioral symptoms in nursing home residents: a cross-sectional analysis” Kromhout MA, Rius Ottenheim N, Putter H, Numans ME, Achterberg WP. <i>The Journal of Nutrition, Health and Aging</i> .   |
| 2019 | “Caffeine and neuropsychiatric symptoms in patients with dementia: A systematic review” M.A.Kromhut, N.Rius Ottenheim, E.Giltay, M.E.Numans, W.P.Achterberg. <i>Experimental Gerontology</i> 122 (2019) 85–91   |
| 2018 | “Caffeine consumption and behavioral symptoms in nursing home residents: a study protocol and evidence-based medicine training program” Michelle A. Kromhout, Monica van Eijk, Marjoleine J.C. Pieper, Victor G.M. Chel, prof. Wilco P. Achterberg, prof. Mattijs E. Numans. April 2018, NJM. |
| 2017 | “Reducing behavioral symptoms in elderly patients with dementia by regulating caffeine consumption: two single-subject trials” M.Kromhout, prof. M.Numans, prof. W.Achterberg. EGM, published online: July 28, 2017.  |
| 2014 | “Relation between caffeine and behavioral symptoms in elderly patients with dementia: an observational study” M.Kromhout, J.Jongerling, W.Achterberg <i>Journal of Nutrition Health and Aging</i> 2014 Apr;18(4):407-10.  |

### Selection of other publications

- 2017 "Te hoog? Ervaren werkbelasting bij eerste jaars aios ouderengeneeskunde" Michelle Kromhout and Saskia van Eck-Memelink. Tijdschrift voor Ouderengeneeskunde
- 2017 "Probleemgedrag bij dementie", M.A. Kromhout, F.J.Bruijel. TPO de Praktijk
- 2017 "Letter to the editor: amyloidosis: a case report and review of literature" M.A.Wegewijs, P.C. de Bruin, E.J. ter Borg. Journal of Clinical Rheumatology.
- 2016 "De specialist ouderengeneeskunde van de toekomst – kunnen we in vliegende vaart mee?" C. de Ruiter, R. Leeuwis, M.Kromhout, Tijdschrift voor Ouderengeneeskunde
- 2016 Contributed to an article in the Volkskrant 12 October 2016 "Er is vrijwel geen geld voor onderzoek naar alledaagse kwalen" about research into everyday ailments and their treatments, such as coffee for sleeping problems in people with dementia
- 2010 "Cafeïne en probleemgedrag bij dementie" M.Kromhout, J.Jongerling, W.Achterberg Tijdschrift voor ouderengeneeskunde 35;5:209
- 2007 "Antipsychotic drug use and hypothermia. Reported cases in literature and WHO database." M.A.Wegewijs, E.Beers, A.J.M.Loonen, R.J. van Marum. Br J Clin Pharmacol 62;6: 736-7.
- 2007 Hypothermia following antipsychotic drug use." R.J. van Marum, M.A.Wegewijs, A.J.M. Loonen, E.Beers. Eur J Clin Pharmacol. June; 63(6): 627–631

### Selection of relevant oral and poster presentations

- 2019 Presentation on behavioral symptoms in persons with dementia and the law 'Als het niet anders kan', at V&VN POH/PVK congress
- 2017-2018 Workshop "de verschillende gezichten van dementie", at V&VN congress
- 2017 Presentation "Elderly care specialist training – does it refer to dignity?" at LUMC international congress "Dignity in old age"
- 2016 Presentation "Probleemgedrag – geen probleem voor de praktijkverpleegkundige" V&VN congress
- 2016 Workshop (with Corinne de Ruiter, Verenso) "De specialist ouderengeneeskunde van de toekomst" at Verenso congress Dementia & Domotica
- 2015 Presentation "Hoe leiden we de SO van de toekomst op?" at My-Doc congress Artsen in control
- 2014 Presentation (with F.J.Bruijel, psychologist) "Mevrouw hangt in de gordijnen - rollen en keuzes van de praktijkverpleegkundige bij probleemgedrag" at V&VN congress
- 2014 Presentation "Samenwerking tussen specialisten ouderengeneeskunde en huisartsen" at Zorgspectrum congress 'een dementievriendelijke gemeente'

- 2014 Presentation “Kopje koffie mevrouw Jansen – de relatie tussen cafeïne en gedrag bij mensen met dementie” at Boerhaave Vorderingen in het specialisme ouderengeneeskunde
- 2010 Presentation “cafeïne en probleemgedrag bij dementie” at Verenso Congress
- 2010 Posterpresentation at IPA congress “The effect of caffeine on behavioral problems in elderly patients with dementia”
- 2008 Panelmember at congress ‘Bewegingsvrijheid voor mensen met dementie’ vereniging voor psychogeriatrie in samenwerking met stichting IDé
- 2006 Posterpresentation “Antipsychotic drug use and hypothermia” at the research meeting of the Nederlandse Vereniging voor Klinische Farmacologie en Biopharmacie

