



## UvA-DARE (Digital Academic Repository)

### Self-Reports and Caregivers' Proxy Reports of Unmet Needs of Persons With Dementia: Implications for Both Partners' Health-Related Quality of Life

Monin, J.K.; Jorgensen, T.D.; MacNeil Vroomen, J.L.

**DOI**

[10.1016/j.jagp.2019.10.006](https://doi.org/10.1016/j.jagp.2019.10.006)

**Publication date**

2020

**Document Version**

Final published version

**Published in**

The American Journal of Geriatric Psychiatry

**License**

Article 25fa Dutch Copyright Act (<https://www.openaccess.nl/en/in-the-netherlands/you-share-we-take-care>)

[Link to publication](#)

**Citation for published version (APA):**

Monin, J. K., Jorgensen, T. D., & MacNeil Vroomen, J. L. (2020). Self-Reports and Caregivers' Proxy Reports of Unmet Needs of Persons With Dementia: Implications for Both Partners' Health-Related Quality of Life. *The American Journal of Geriatric Psychiatry*, 28(3), 363-367. <https://doi.org/10.1016/j.jagp.2019.10.006>

**General rights**

It is not permitted to download or to forward/distribute the text or part of it without the consent of the author(s) and/or copyright holder(s), other than for strictly personal, individual use, unless the work is under an open content license (like Creative Commons).

**Disclaimer/Complaints regulations**

If you believe that digital publication of certain material infringes any of your rights or (privacy) interests, please let the Library know, stating your reasons. In case of a legitimate complaint, the Library will make the material inaccessible and/or remove it from the website. Please Ask the Library: <https://uba.uva.nl/en/contact>, or a letter to: Library of the University of Amsterdam, Secretariat, Singel 425, 1012 WP Amsterdam, The Netherlands. You will be contacted as soon as possible.

*UvA-DARE is a service provided by the library of the University of Amsterdam (<https://dare.uva.nl>)*



## Brief Report

# Self-Reports and Caregivers' Proxy Reports of Unmet Needs of Persons With Dementia: Implications for Both Partners' Health-Related Quality of Life

Joan K. Monin, Ph.D., Terrence D. Jorgensen, Ph.D.,  
Janet L. MacNeil Vroomen, Ph.D.

## ARTICLE INFO

*Article history:*

Received September, 9 2019

Revised October, 1 2019

Accepted October, 4 2019

*Key Words:*

Unmet needs

health-related quality of life

dementia

caregiving

## ABSTRACT

**Objective:** This study examined in a large sample of dementia caregiving dyads the associations between both partners' reports of unmet needs in persons with dementia (PwDs) and both partners' health-related quality of life (HRQOL). **Methods:** This was a cross-sectional self-report survey of 521 community-dwelling dyads in a pragmatic trial in the Netherlands. The Camberwell Needs Assessment was used to measure PwDs' unmet needs. Both partners' self-reported their HRQOL using the EuroQol-5. **Results:** Controlling for covariates, PwDs' self-reported greater unmet needs were significantly associated with PwDs' and caregivers' lower self-reported HRQOL (actor effect;  $b = -0.044$ ,  $\beta = -0.226$ ,  $z = -3.588$ ,  $p < 0.001$  and partner effect;  $b = -0.021$ ,  $\beta = -0.131$ ,  $z = -2.154$ ,  $p = 0.031$ ). Caregivers' proxy reports were greater than PwDs' self-reported unmet needs ( $\Delta = 0.66$ ,  $\chi^2(1) = 55.881$ ,  $p < .0001$ ). **Conclusion:** Clinicians should use caution in relying on caregiver proxy reports of PwDs' needs and HQOL alone regarding healthcare decision making. (Am J Geriatr Psychiatry 2020; 28:363–367)

From the Social and Behavioral Sciences Department, Yale School of Public Health, Yale School of Medicine, New Haven, CT; Department of Methods and Statistics, Research Institute for Child Development and Education, the University of Amsterdam, Amsterdam, the Netherlands; and the Section Geriatrics, Department of Internal Medicine, Amsterdam University Medical Center, Location Academic Medical Center, Amsterdam, the Netherlands. Send correspondence and reprint requests to Joan K. Monin, Ph.D., Social and Behavioral Sciences Division, Yale School of Public Health, Yale School of Medicine, 60 College St., New Haven, CT 06520. e-mail: [joan.monin@yale.edu](mailto:joan.monin@yale.edu)

© 2019 American Association for Geriatric Psychiatry. Published by Elsevier Inc. All rights reserved.

<https://doi.org/10.1016/j.jagp.2019.10.006>

## INTRODUCTION

Maximizing the health-related quality of life of persons with dementia and their informal caregivers as a unit is an important healthcare goal. Although many factors likely affect the health-related quality of life of persons with dementia and caregivers, many clinicians focus on the unmet needs of the person with dementia as a central factor. Unmet needs are defined as “particular areas of life of a person for which insufficient or inadequate support is provided or appropriate support is not available.”<sup>1</sup> Existing research shows that unmet needs lead to more behavioral problems in persons with dementia and caregiver burden which in turn negatively influence health-related quality of life of persons with dementia.<sup>2</sup> Yet, unmet needs are subjective, and associations between unmet needs and both partners’ outcomes may be inaccurate depending on whose perspective is assessed. Most research has relied on proxy reports of the persons with dementia’s unmet needs. No study using a large sample has examined whether self-reports and caregiver proxy reports of unmet needs in persons with dementia affect both dyad members’ health-related quality of life, controlling for potential covariates.

Drawing from interdependence theory, the present study examined intrapersonal and interpersonal associations between unmet needs appraisals of persons with dementia and health-related quality of life of caregivers and care recipients using the Actor-Partner Interdependence Model (APIM).<sup>3</sup> The APIM allows concurrent examination of the impact of a person’s explanatory variable on his or her own outcome (actor effect) and on the outcome of the partner (partner effect).<sup>3</sup> Our hypotheses are as follows.

Hypothesis 1a and b: Higher self-reported unmet needs in persons with dementia will be associated with worse health-related quality of life in persons with dementia, and higher proxy reports by caregivers of persons with dementia’s unmet needs will be associated with caregivers’ worse health-related quality of life (actor effects).

Hypothesis 2a and b: Higher self-reported unmet needs in persons with dementia will be associated with worse health-related quality of life in caregivers, and higher proxy reports by caregivers of persons with dementia’s unmet need will be associated with

worse health-related quality of life in persons with dementia (partner effects).

Hypothesis 3: Caregivers’ proxy reports of the unmet needs of the person with dementia will be higher than the self-reports of unmet needs of the person with dementia.

---

## METHOD

This was a secondary analysis of baseline data from the COMPAS (Case management of persons with dementia and their caregivers) project, a non-randomized, controlled, prospective, observational, cohort study registered with the Dutch Trials Registry (NTR3268) and published elsewhere.<sup>4</sup> See prior publication for participant characteristics.<sup>4</sup> The Medical Ethics Committee of the VU University medical center approved this study in November 2010 and all participants gave written consent. The informal caregiver signed on behalf of the person with dementia if they were unable to understand and reproduce the study goals. Primary informal caregivers (n = 521) and persons with dementia were recruited from various regions of the Netherlands from April 2011 to November 2012. Persons with dementia were eligible for this study if they lived at home, had an established/formal diagnosis of dementia, were not terminally-ill, were not anticipated to be admitted to a long-term care facility within 6 months, and had an informal caregiver. The informal caregivers were eligible if they were the primary informal caregiver responsible for caring for the person with dementia, had sufficient language proficiency and were not severely ill.

### Unmet Needs

The Camberwell Assessment of Need for the Elderly (CANE) is a comprehensive assessment that includes physical, psychological, social, and environmental needs of the older person based on 24 items. The CANE has good content, construct, and consensual validity in addition to appropriate criterion validity.<sup>5</sup> Reliability is generally very high:  $\kappa > 0.85$  for all staff ratings of inter-rater reliability.<sup>5</sup> The CANE was administered to the person with dementia as well as the primary caregiver proxy report.

### Health Related Quality of Life

Health related quality of life was assessed using the EuroQol-5 Dimensions (EQ-5D), which is the most widely used preference based generic instrument and has well-established psychometric properties.<sup>6</sup> It has been validated in individuals with mild to moderate cognitive impairment. The EQ-5D includes five dimensions—mobility, self-care, usual activities, pain and discomfort, and anxiety, and depression. Participants answer with the responses—no problems, some problems, or severe problems. The set of five responses defines a health state. The 243 (3<sup>5</sup>) possible health states are weighted using a valuation set from a sample of the Dutch general population known as the Dutch EQ-5D tariff,<sup>7</sup> resulting in a utility score. This utility reflects the relative desirability of a particular health state and is measured on a scale from 0 (death) to 1 (full health). Some health states are regarded as being worse than death, resulting in negative utilities.<sup>7</sup> The informal caregiver as well as the person with dementia completed their own EQ-5D questionnaires.

### Covariates

Age, sex, education, presence of case manager, Mini Mental State Examination (MMSE),<sup>8</sup> General Health Questionnaire,<sup>9</sup> Neuropsychiatric Inventory,<sup>10</sup>

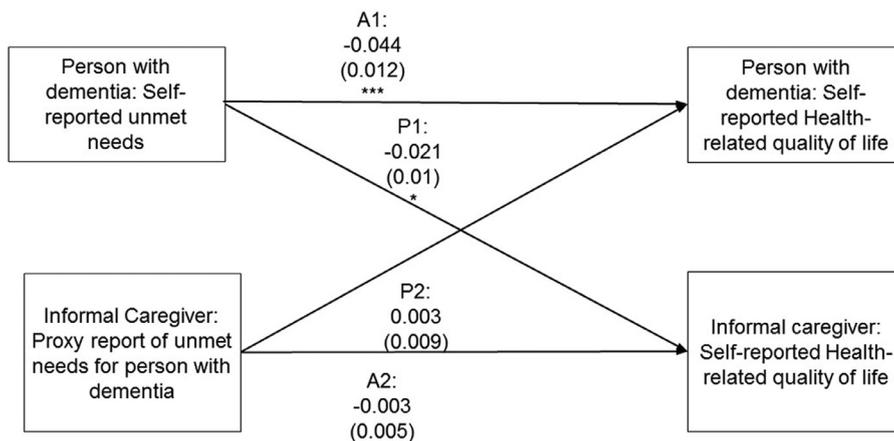
Neuropsychiatric inventory of caregiver distress,<sup>10</sup> sense of competence,<sup>11</sup> multimorbidity of the Pwd,<sup>12</sup> relationship of the caregiver were included in the regression models.

## ANALYSIS AND RESULTS

To examine hypotheses 1 and 2, that there would be actor and partner effects of proxy and self-reports of person with dementia’s unmet needs on the person with dementia’s and caregivers’ self-reports of health-related quality of life, we used the APIM with structural equation modeling in R (Lavaan package<sup>13</sup>). To examine hypothesis 3, that caregivers would overestimate person with dementia’s unmet needs, we tested the equivalence of each dyad member’s means using a Wald  $\chi^2$  test in the Lavaan package. Each model was adjusted for the covariates listed in the method section. For the results, we report both the standardized ( $\beta$ ) and unstandardized slopes (b). Standardized slopes ( $\beta$ ) are interpreted identically to unstandardized slopes (b), except that “one-unit increase” is replaced with “1-SD increase.”

As shown in Figure 1, for every one unit increase in self-reported unmet needs (range: 0–13), there was a 0.044 decrease in self-reported health-related quality of life (actor effect;  $b = -0.044$ ,  $\beta = -0.226$ ,  $z = -3.588$ ,  $p < 0.001$ ) and a 0.021 decrease in caregiver self-

**FIGURE 1. Actor partner interdependence model. A: actor effect; P: partner effect. This model was adjusted for age, sex, education, presence of case manager, Mini Mental State Examination (MMSE),<sup>8</sup> General Health Questionnaire,<sup>9</sup> Neuropsychiatric Inventory,<sup>10</sup> Neuropsychiatric inventory of caregiver distress,<sup>10</sup> sense of competence,<sup>11</sup> multimorbidity of the Pwd,<sup>12</sup> relationship of the caregiver. \*\*\* indicates a p value <0.0001 and \* indicates a p value <0.05.**



reported health-related quality of life (partner effect;  $b = -0.02$ ,  $\beta = -0.131$ ,  $z = -2.154$ ,  $p = 0.031$ ). Greater caregiver proxy reports of the person with dementia's unmet needs were not significantly associated with lower self-reported health-related quality of life (actor effect;  $b = -0.003$ ,  $\beta = -0.031$ ,  $z = -0.571$ ,  $p = 0.569$ ) or the person with dementia's self-reported health-related quality of life (partner effect;  $b = 0.003$ ,  $\beta = 0.024$ ,  $z = 0.756$ ,  $p = 0.756$ ). In a separate analysis, caregiver reports of unmet needs (mean = 1.30, SD = 1.87) were greater than the person with dementia's self-reported unmet needs (mean = 0.57, SD = 1.06) while health-related quality of life did not differ between the informal caregiver (mean = 0.84, SD = 0.18) versus for the person with dementia (mean = 0.81, SD = 0.21).

---

### DISCUSSION

This study shows that self-reported unmet needs of persons with dementia are associated with poor health-related quality of life in both persons with dementia and their informal caregivers. In other words, to the extent that an unmet need is meaningful to the person with dementia, it is also meaningful for their well-being. And, this in turn likely influences the well-being of the caregiver. These findings emphasize the importance of giving voice to the person with dementia in their own healthcare management. Not only is it important for the self but also the caregiver.

In contrast to the above findings, caregivers' proxy reports of unmet needs in persons with dementia were not significantly associated with caregivers' own or their care recipient's health related quality of life. Thus, caregivers' views of their partner's unmet needs may have less importance to the person with dementia; they may not align with the person with dementia's current values. In with this, we found that caregivers reported greater unmet needs in persons with dementia than persons with dementia reported for themselves. These findings are consistent with prior research on unmet needs in persons with dementia<sup>2</sup> but extend them by

utilizing a large sample, controlling for covariates. Although caregivers are an important source of information and are greatly important to the well-being and care of the person with dementia, these findings emphasize the need for multiple reports of clinical outcomes.

There are some limitations to this study. We did not have information about the caregivers' own unmet needs, and this study was cross-sectional which does not allow us to determine directionality or causality of the associations. Future research should examine both partners own unmet needs and their associations with both partners' own health-related quality of life longitudinally. Independent ratings of unmet needs may also shed light on whether the caregiver or care recipient appears to be more accurate.

The results of this study have important clinical and research implications. They suggest that health-care professionals should collect information about unmet needs from both persons with dementia and caregivers to maximize predictive accuracy of quality of life in caregiving dyads. This is especially important given that interventions for persons with dementia and their caregivers often measure unmet needs as a way of tailoring or to assess whether the intervention was successful.<sup>14</sup>

---

### DISCLOSURE

*There are no conflicts of interest relevant to this work.*

*Preparation for this manuscript was supported in part by the National Institute on Aging to Dr Monin (R01AG058565). Data collection was funded by the Dutch National Programme for Improving Care for Older Persons (ZonMw no 313080201). Dr MacNeil Vroomen is funded through the Netherlands Organization for Health Research and Development (NWO-ZonMw Veni, 091.619.060). Dr Jorgensen is funded through the Dutch Research Council (NWO, 016. Veni.195.457).*

### References

1. Van Der Roest HG, Meiland FJ, Maroccini R, et al: Subjective needs of people with dementia: a review of the literature. *Int Psycho* 2007; 19:559-592
2. Bakker C, de Vugt ME, van Vliet D, et al: Unmet needs and health-related quality of life in young-onset dementia. *Am J Geriatr Psychiatry* 2014; 22:1121-1130

3. Cook WL, Kenny DA: The Actor–partner interdependence model: A model of bidirectional effects in developmental studies. *Int J Behav Dev* 2005; 29:101–109
4. MacNeil Vroomen J, Bosmans JE, Eekhout I, et al: The cost-effectiveness of two forms of case management compared to a control group for persons with dementia and their informal caregivers from a societal perspective. *PLoS One* 2016; 11:e0160908
5. Reynolds T, Thornicroft G, Abas M, et al: Camberwell assessment of need for the elderly (CANE). Development, validity and reliability. *Br J Psychiatry* 2000; 176:444–452
6. Brooks R: EuroQol: the current state of play. *Health Policy* 1996; 37:53–72
7. Lamers LM, Stalmeier PF, McDonnell J, et al: [Measuring the quality of life in economic evaluations: the Dutch EQ-5D tariff]. *Ned Tijdschr Geneesk* 2005; 149:1574–1578
8. Folstein MF, Folstein SE, McHugh PR: “Mini-mental state”: a practical method for grading the cognitive state of patients for the clinician. *J Psychiatr Res* 1975; 12:189–198
9. Goldberg DP, Hillier VF: A scaled version of the general health questionnaire. *Psychol Med* 1979; 9:139–145
10. Cummings JL, Mega M, Gray K, et al: The Neuropsychiatric Inventory comprehensive assessment of psychopathology in dementia. *Neurology* 1994; 44:2308–2314
11. Vernooij–Dassen MJ, Felling AJ, Brummelkamp E, Dauzenberg MG, van den Bos GA, Grol R: Assessment of caregiver’s competence in dealing with the burden of caregiving for a dementia patient: a Short Sense of Competence Questionnaire (SSCQ) suitable for clinical practice. *J Am Geriatr Soc* 1999; 47:256–257
12. Lutomski JE, Baars MA, Schalk BW, et al: The development of the Older Persons and Informal Caregivers Survey Minimum DataSet (TOPICS-MDS): a large-scale data sharing initiative. *PLoS One* 2013; 8:e81673
13. Rosseel Y: Lavaan: An R package for structural equation modeling and more. Version 0.5–12 (BETA). *J Stat Softw* 2012; 48:1–36
14. Tanner JA, Black BS, Johnston D, et al: A randomized controlled trial of a community-based dementia care coordination intervention: effects of MIND at Home on caregiver outcomes. *Am J Geriatr Psychiatry* 2015; 23:391–402