Citation	<p>Philip Moons</p> <p>Chronic illness as a 'family disease': The need for appropriate scientific methods for dyadic research.</p> <p>Eur J Cardiovasc Nurs. 2020 Feb;19(2):98-99</p>
Archived version	Author manuscript: the content is identical to the content of the published paper, but without the final typesetting by the publisher
Published version	https://doi.org/10.1177/1474515120902376
Journal homepage	https://journals.sagepub.com/home/cnu
Author contact	<p>your email Philip.Moons@med.kuleuven.be</p> <p>your phone number + 32 (0)16 373315</p>
IR	

(article begins on next page)

Editorial

Chronic illness as a “family disease”: The need for appropriate scientific methods for dyadic research

Philip Moons^{a,b,c}, Sofie Prikken^{d,e}, Koen Luyckx^{d,f}

^a KU Leuven Department of Public Health and Primary Care, KU Leuven, Leuven, Belgium

^b Institute of Health and Care Sciences, University of Gothenburg, Gothenburg, Sweden

^c Department of Paediatrics and Child Health, University of Cape Town, South Africa

^d School Psychology and Development in Context, KU Leuven, Leuven, Belgium

^e Research Foundation Flanders, Brussels, Belgium

^f UNIBS, University of the Free State, Bloemfontein, South Africa

Corresponding author at: KU Leuven Department of Public Health and Primary Care, Kapucijnenvoer 35 box 7001, B-3000 Leuven, Belgium. Tel.: +32 16 373315; fax: + 32 16 336970. E-mail address: philip.moons@kuleuven.be

Chronic diseases, such as cardiovascular conditions, do not only have an impact on the afflicted individual, but also affect families of the patients. Indeed, spouses are often directly experiencing the consequences of the illness of their loved one and go through stressful periods. Frequently, families and partners are taking up the role of informal caregiver. This allows them to play a meaningful role in the care for the patient and, if necessary, to fill potential gaps in the continuing care. Furthermore, involvement of families in the care for patients has been shown to improve outcomes, such as enhanced self-care and adherence, and consequently reduce mortality (1). Given these demonstrated benefits, cardiovascular nurses have a positive attitude towards family involvement in the care for patients (1).

The downside of being an informal caregiver is that they are vulnerable for developing caregiver burden (2, 3). Indeed, the stress that is associated with caring for a loved one can become hard to handle in the long run. Furthermore, the need for long-term care may jeopardize the relationship between the patient and his/her partner. Such an altered relationship is found to impact on patient outcomes as well (4). To get a full understanding of the impact of a condition on the families/caregivers, and to capture the impact of families/caregivers on patients' outcomes, dyadic research is needed. When the perspective of 3 related parties are studied, e.g. adolescents, their mother and their father, triadic research is performed (5, 6).

In the *European Journal of Cardiovascular Nursing*, numerous empirical studies on informal caregivers have been published over the past few years (2, 7-12). Five of these studies were conducted in caregivers of patients with heart failure (2, 8, 10-12); one study in caregivers of patient following transcatheter aortic valve implantation (9); and one study in caregivers of stroke survivors (7). Given that several studies were conducted in heart failure, it suggests that the role of informal caregivers in heart failure is well-established. Research in which the dyad of patient and caregiver/spouse was the unit of investigation, however, has been scarce (8, 13).

Dyadic and triadic research requires dedicated research methods. Because the experiences and perceptions of a patient and his/her caregiver(s) are not unrelated, the data ought to be treated using multilevel approaches. Doing so, researchers can account for the interdependency of the data and can investigate how patients and caregivers influence one another. However, contemporary dyadic research methods are still rarely utilized in cardiovascular research. To stimulate dyadic research and to foster the use of appropriate techniques, in the methods corner of the current issue of the *European Journal of Cardiovascular Nursing*, a paper of Lyon & Lee is published describing two methods that can be used in dyadic research (14). One method is the matched pairs model, and the other is the incongruence model (14). Each method allows to addressing different research questions. The use of these methods assure that researchers are conducting truly dyadic research.

In sum, as the importance of the role of caregivers and families is increasingly acknowledged, it is critical that researchers apply appropriate statistical techniques that account for the interdependency between patients and their caregivers. Indeed, researchers should employ contemporary dyadic research methods in order to make their research truly dyadic. The paper of Lyons & Lee in the methods corner of the current issue is aiming to provide guidance to researchers to adopt such appropriate techniques.

References

1. Luttik MLA, Goossens E, Agren S, Jaarsma T, Martensson J, Thompson DR, et al. Attitudes of nurses towards family involvement in the care for patients with cardiovascular diseases. *Eur J Cardiovasc Nurs*. 2017;16(4):299-308.
2. Durante A, Greco A, Annoni AM, Steca P, Alvaro R, Vellone E. Determinants of caregiver burden in heart failure: does caregiver contribution to heart failure patient self-care increase caregiver burden? *Eur J Cardiovasc Nurs*. 2019;18(8):691-9.
3. Bjornnes AK, Moons P, Parry M, Halvorsen S, Tonnessen T, Lie I. Experiences of informal caregivers after cardiac surgery: a systematic integrated review of qualitative and quantitative studies. *BMJ Open*. 2019;9(11):e032751.
4. Lee CS, Vellone E, Lyons KS, Cocchieri A, Bidwell JT, D'Agostino F, et al. Patterns and predictors of patient and caregiver engagement in heart failure care: a multi-level dyadic study. *Int J Nurs Stud*. 2015;52(2):588-97.
5. Burstrom A, Acuna Mora M, Ojmyr-Joelsson M, Sparud-Lundin C, Rydberg A, Hanseus K, et al. Ready for transfer to adult care? A triadic evaluation of transition readiness in adolescents with congenital heart disease and their parents. *J Fam Nurs*. 2019;25(3):447-68.
6. Prikken S, Raymaekers K, Oris L, Rassart J, Weets I, Moons P, et al. A triadic perspective on control perceptions in youth with type 1 diabetes and their parents: Associations with treatment adherence and glycemic control. *Diabetes Res Clin Pract*. 2019;150:264-73.
7. Juth V, Chan MK, Cramer SC, Holman EA. Assessing acute psychological distress in the immediate aftermath of stroke. *Eur J Cardiovasc Nurs*. 2018;17(2):186-9.
8. Hooker SA, Schmiede SJ, Trivedi RB, Amoyal NR, Bekelman DB. Mutuality and heart failure self-care in patients and their informal caregivers. *Eur J Cardiovasc Nurs*. 2018;17(2):102-13.
9. Baumbusch J, Lauck SB, Achtem L, O'Shea T, Wu S, Banner D. Understanding experiences of undergoing transcatheter aortic valve implantation: one-year follow-up. *Eur J Cardiovasc Nurs*. 2018;17(3):280-8.
10. Liljeroos M, Stromberg A, Arestedt K, Chung ML. Mediation effect of depressive symptoms in the relationship between perceived control and wellbeing in patients with heart failure and their partners. *Eur J Cardiovasc Nurs*. 2018;17(6):527-34.
11. Janssen DJ, Boyne J, Currow DC, Schols JM, Johnson MJ, La Rocca HB. Timely recognition of palliative care needs of patients with advanced chronic heart failure: a pilot study of a Dutch translation of the Needs Assessment Tool: Progressive Disease - Heart Failure (NAT:PD-HF). *Eur J Cardiovasc Nurs*. 2019;18(5):375-88.
12. Wingham J, Frost J, Britten N, Greaves C, Abraham C, Warren FC, et al. Caregiver outcomes of the REACH-HF multicentre randomized controlled trial of home-based rehabilitation for heart failure with reduced ejection fraction. *Eur J Cardiovasc Nurs*. 2019;18(7):611-20.
13. Malm D, Fridlund B, Ekblad H, Karlstrom P, Hag E, Pakpour AH. Effects of brief mindfulness-based cognitive behavioural therapy on health-related quality of life and sense of coherence in atrial fibrillation patients. *Eur J Cardiovasc Nurs*. 2018;17(7):589-97.
14. Lyon KS, Lee CS. Understanding the Family Care Dyad: A Comparison of Two Multilevel Models. *Eur J Cardiovasc Nurs*. 2020;in press.