

# Pressure injuries in Indonesian community-dwelling older adults

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## IMPACT

This dissertation gives a first view on the problem of pressure injuries among Indonesian community-dwelling older adults. The studies in this dissertation provide a comprehensive basis of information from the individual level to the institutional/policy level to stimulate further development of community nursing practice and education in preventing pressure injuries among community-dwelling older adults. The studies in this dissertation focused on 1) the prevalence of PIs among older adults living at home; 2) the family caregivers' knowledge, attitude and practice in PI prevention; 3) community nurses' knowledge and attitude toward PI prevention; and 4) community nurses' perception of barriers and facilitators in PI prevention.

This chapter reflects on the impact of the studies of this dissertation on practice, education, and society. Furthermore, activities that will be performed to disseminate the study results are discussed.

## RELEVANCE

### Societal relevance

Indonesia is a middle-income country experiencing an ageing population <sup>1</sup>. Around 23 million of its people are older adults (60 years of age or older) living at home, mostly with their family members and are considered community-dwelling older adults.<sup>2-4</sup> The prevalence of chronic diseases (i.e. hypertension, arthritis, diabetes and stroke) among this vulnerable population significantly increased in the last ten years leading to more frailty, care dependency and disabilities.<sup>5</sup> Inappropriate care for this vulnerable population could lead to adverse events such as pressure injuries (PIs). However, Indonesian older adults often do not access formal care even though health care services currently are available for this population.<sup>2, 6, 7</sup> Consequently, these older adults primarily receive care provided by their family members even though the majority of them (78.8%) have a healthcare insurance.<sup>6, 8-10</sup> No information is available with regard to whether or not older adults received appropriate care from family caregivers. In fact, almost all patients in Indonesian hospitals who suffered from PIs before hospital admission were older adults who lived at home, and none had received home care services before hospital admission.<sup>9</sup> The only way to investigate such real life situations is by directly examining older adults and their family caregivers in the general population. Our studies are the first in Indonesia investigating PIs among

community-dwelling older adults, irrespective of whether they used health care services. We found a prevalence rate of PIs among 325 community-dwelling older adults of 10.8%. Based on this number and considering the number of inhabitants in Bandung, it is expected that around 11,000 to 32,000 people aged 60 years or older living at home suffer from PIs.<sup>11</sup> Therefore, our studies reveal a serious problem in society and this must raise awareness of the PI problem in the community among older adults and their family caregivers, program coordinators of the health department, the municipalities and research locations.

Therefore, first, the older adults and their family caregivers were informed about our study objectives and why these are important. After collecting the data, we also discussed with them about pressure injuries, including the definition, symptoms, causes, impact and how to prevent PIs at home. Second, the municipalities were also informed about the study objectives and the results. We discussed which support they can provide regarding this issue. Third, we collaborated closely with the coordinators of the health department starting from the early beginning of our studies. This collaboration built their interest in thinking and talking about pressure injuries among community-dwelling older adults and reflecting on what this means concerning community nursing programs. Next to their role as program planners in the health department, the coordinators do realize clearly now that the problem of pressure injuries among community-dwelling older adults must be a priority concern even though, at this moment it is not in the planned program.

It is clear that our results stress the importance of preventing PIs among community-dwelling older adults through comprehensive planning at individual, family, community and institutional / health care organisational levels. Considering the fact that pressure injuries lead to an economic burden on healthcare systems,<sup>12, 13</sup> affect people's quality of life emotionally, physically and socially<sup>14-16</sup> and even pose a higher risk of dying,<sup>17, 18</sup> our results will be of interest for government, scientists, academic personnel and health insurance companies.

## **Family and community nursing practice and education**

Pressure Injuries (PIs) are a global health care problem. In the community, the prevalence and incidence rates of PIs are high in populations at risk, such as community-dwelling older adults.<sup>19</sup> This is also the case in Indonesia. As the first in Indonesia, our studies gave insight into the problem of pressure injuries among

community-dwelling older adults. With a prevalence rate of >10%, our results show that pressure injuries among older adults living at home call for serious attention and strategies to address this problem should become a priority.

Due to the nature of their role, community nurses could take the lead in decreasing the prevalence rate of PIs among community-dwelling older adults.<sup>20-24</sup> Community nurses perform various activities, including health promotion, disease management, and public health activities, such as community empowerment.<sup>20</sup> As this is in line with PI prevention activities, this should also be one of their major official responsibilities. The results of this dissertation might increase community nurses' awareness to pay more attention to this problem in their working area.

This dissertation also showed that more than half of the PIs found in our population were classified as being the preventable category 1. Therefore, it is essential that community nurses provide family caregivers with essential knowledge and skills regarding PI prevention among older adults at home, as well as support the improvement of self-care management among older adults.

In this dissertation, we developed and validated the "KAP-PI" (Knowledge, Attitude and Practice of Pressure Injuries) instrument to assess family caregivers' knowledge, attitude, and practice in preventing pressure injuries. This instrument is available to be used in community care, education and research to assess the performance of family caregivers in preventing pressure injuries. The KAP-PI instrument could for instance assess family caregivers' knowledge, attitude and practice before and after conducting health education activities.

This dissertation also provided insight into the knowledge and attitude of community nurses toward PI prevention in Bandung city. To deliver evidence-based PI prevention and/or treatment, community nurses need adequate knowledge and skills.<sup>19</sup> Furthermore, understanding their attitudes towards PI prevention is important because a positive attitude is considered to be a precursor to preferred behaviour.<sup>25</sup> The European Pressure Ulcer Advisory Panel (EPUAP), National Pressure Injury Advisory Panel (NPIAP) and Pan Pacific Pressure Injury Alliance (PPPIA) recommend to regularly assess the knowledge and attitude of health care professionals on pressure injury care.<sup>19</sup> In addition, former studies showed that knowledge and attitude correlate positively with the practice of PI prevention.<sup>26, 27</sup> Various studies evaluated nurses' knowledge about and attitude towards PI prevention (8-21), but most of these studies focused on nurses working in hospitals or nursing homes. Our study in Indonesia (the

first in the context of the community,) shows that community nurses in a large city in Indonesia had considerable knowledge deficiencies but a positive attitude towards PI prevention. Therefore, we recommend training to increase their fundamental understanding and skills of PI prevention and treatment, based on international guidelines. Planning, developing and providing the training could be interesting for academic personnel, coordinators of the health department, the Indonesian Community Nursing Association, and the Indonesian Wound Ostomy and Continence Nursing Association.

## **Dissemination of findings**

In an academic setting, awareness can be created by publishing and presenting the study results in national and international journals and on conferences. A number of articles has already been published. Our first article, titled "The prevalence of pressure ulcers in community-dwelling older adults: a study in an Indonesian city", was one of the most frequently read articles in the *International Wound Journal* (in the year of publication). Next to the publications, presentations about study results were given in various (inter)national scientific conferences. In addition, we disseminate the results to the municipalities of the study area through direct presentations in front of the leaders and provide them with the research report.

The collaboration with the health department aided the dissemination of our research findings. For instance, when recruiting community nurses in Bandung city for the studies described in chapters five and six, the results described in chapter 2 were presented to these community nurses. This contributed to their awareness of the pressure injury problem. Moreover, we reported our findings to program coordinators of the health department in Bandung city. Following this approach, this provides opportunities to further disseminate the findings to other relevant stakeholders.

To disseminate the results and build awareness on an even wider scale, it is important to disseminate our study results to the Indonesian National Nurse Association, the Indonesian Community Nursing Association and the Indonesian Wound Ostomy and Continence Nursing Association. Members of these associations include nurses from all Indonesian provinces. It is expected that the outcomes of our studies will contribute to the prevention of pressure injuries among community-dwelling older adults in Indonesia.

## REFERENCES

1. Nikkil Sudharsanan DEB. The Demography of Aging in Low- and Middle-Income Countries: Chronological versus Functional Perspectives. In: Majmundar MK HM, editor. National Academies of Sciences, Engineering, and Medicine; Division of Behavioral and Social Sciences and Education; Committee on Population Future Directions for the Demography of Aging: Proceedings of a Workshop. Washington (DC): National Academies Press (US); 2018.
2. Badan Pusat Statistik-Statistics Indonesia. Statistik penduduk lanjut usia 2021 [Internet]. Badan Pusat Statistik. 2021 [cited 27 December 2021]. Available from: <https://www.bps.go.id/publication/2021/12/21/c3fd9f27372f6ddcf7462006/statistik-penduduk-lanjut-usia-2021.html>.
3. Pemerintah Negara Republik Indonesia. Peraturan Menteri Kesehatan Republik Indonesia nomor 67 Tahun 2015 tentang Penyelenggaraan pelayanan kesehatan lanjut usia, (2015).
4. Pemerintah Negara Republik Indonesia. Undang-Undang No.13 Tahun 1998 tentang Kesejahteraan Lanjut Usia. In: Indonesia MNSNR, editor. Jakarta: Menteri Negara Sekretaris Negara Republik Indonesia; 1998.
5. Kementerian Kesehatan Republik Indonesia: Badan Penelitian dan Pengembangan Kesehatan. Hasil Utama Riskesdas 2018. Jakarta: Kementerian Kesehatan Republik Indonesia; 2019.
6. Sari SP, Everink IH, Sari EA, Afriandi I, Amir Y, Lohrmann C, et al. The prevalence of pressure ulcers in community-dwelling older adults: a study in an Indonesian city. *International Wound Journal*. 2019;16(2):534-41.
7. Badan Pusat Statistik-Statistics Indonesia. Statistik Penduduk Lanjut Usia 2019 [Internet]. ©Badan Pusat Statistik; 2020:106. Available from: <https://www.bps.go.id/publication/download.html?nrbvfeve=YWlxN2U3NW RiZTYzMGUw NTEzM GFINT Ni&xzmn=aHR0c HM6Ly 93d3c uYnBz LmdvL mlkL3 B1Ymx pY2F0 aW9uL zlwMTkvMTIvMjAv YWlxN2U3NW RiZTYzMGUw NTEzM GFINT NiL3N 0YXRp c3Rpay1wZW 5kdWR 1ay1s YW5qd XQtdX NpYS0 yMDE5 Lmh0b Ww% 3D&twoad fnoar feauf= MjAyM S0wMS 0xOSA xNTox NDo0NQ% 3D% 3D>.
8. Amir Y, Tan FE, Halfens R, Lohrmann C, Schols J. Pressure ulcer prevalence and care in Indonesian hospitals: a multicenter, cross-sectional evaluation using an extended donabedian model. *Ostomy Wound Manage*. 2017;63(2):8-23.
9. Amir Y, Lohrmann C, Halfens RJ, Schols JM. Pressure ulcers in four Indonesian hospitals: prevalence, patient characteristics, ulcer characteristics, prevention and treatment. *International Wound Journal*. 2017;14(1):184-93.
10. Amir Y, Halfens RJ, Lohrmann C, Schols JM. Pressure ulcer prevalence and quality of care in stroke patients in an Indonesian hospital. *J Wound Care*. 2013;22(5):254, 6, 8-60.
11. L. Naing TW, B.N. Rusli. Practical Issues in Calculating the Sample Size for Prevalence Studies. *Orofacial Sciences* 2006;1:9-14.
12. Kandilov AMG, Coomer NM, Dalton K. The Impact of Hospital-Acquired Conditions on Medicare Program Payments. *Medicare & Medicaid Research Review*. 2014;4(4):E1-E23.
13. Russo CA, Steiner C, Spector W. Hospitalizations related to pressure ulcers among adults 18 years and older, 2006: statistical brief# 64. 2006.

14. Gorecki C, Brown JM, Nelson EA, Briggs M, Schoonhoven L, Dealey C, et al. Impact of pressure ulcers on quality of life in older patients: a systematic review. *Journal of the American Geriatrics Society*. 2009;57(7):1175-83.
15. Esson L, Spilsbury K, Nelson E, Cullum C. Inpatients felt that pressure ulcers had emotional, mental, physical, and social effects on quality of life because nurses did not adequately treat or manage their pain or discomfort. *Evidence-based nursing*. 2007;10(4):128.
16. Jackson DE, Durrant LA, Hutchinson M, Ballard CA, Neville S, Usher K. Living with multiple losses: Insights from patients living with pressure injury. *Collegian*. 2018;25(4):409-14.
17. Landi F, Onder G, Russo A, Bernabei R. Pressure ulcer and mortality in frail elderly people living in community. *Arch Gerontol Geriatr*. 2007;44 Suppl 1:217-23.
18. Jaul E, Calderon-Margalit R. Systemic factors and mortality in elderly patients with pressure ulcers. *Int Wound J*. 2015;12(3):254-9.
19. European Pressure Ulcer Advisory Panel, National Pressure Injury Advisory Panel and Pan Pacific Pressure Injury Alliance. Prevention and treatment of pressure ulcers/injuries: clinical practice guideline. The international guideline. Emily Haesler (Ed.). EPUAP/NPIAP/PPPIA: 2019. Available from: [https:// www. epuap. org/ pu-guide lines/](https://www.epuap.org/pu-guidelines/). 2. Corbett LQ, Funk M, Fortunato G, O'Sullivan
20. Pemerintah Negara Republik Indonesia. Peraturan Pelaksanaan Undang-Undang Nomor 38 Tahun 2014 Tentang Keperawatan 26 (2019).
21. Kementerian Kesehatan Republik Indonesia. Keputusan Menteri Kesehatan Republik Indonesia Nomor Hk.01.07/Menkes/425/2020 Tentang Standar Profesi Perawat HK.01.07/MENKES/425/2020 (2020).
22. Pemerintah Negara Republik Indonesia. Peraturan Menteri Pendayagunaan Aparatur Negara Dan Reformasi Birokrasi Republik Indonesia Nomor 35 Tahun 2019 Tentang Jabatan Fungsional Perawat, Nomor 35 (2019).
23. Kementerian Kesehatan Republik Indonesia. Peraturan Menteri Kesehatan Republik Indonesia Nomor 43 Tahun 2019 Tentang Pusat Kesehatan Masyarakat (2019).
24. Kementerian Kesehatan Republik Indonesia. Peraturan Menteri Kesehatan Republik Indonesia Nomor 40 Tahun 2017 Tentang Pengembangan Jenjang Karir Profesional Perawat Klinis (2017).
25. Ajzen I. The theory of planned behaviour: Reactions and reflections. *Psychology & Health*. 2011;26(9):1113-27.
26. Beeckman D, Defloor T, Schoonhoven L, Vanderwee K. Knowledge and Attitudes of Nurses on Pressure Ulcer Prevention: A Cross-Sectional Multicenter Study in Belgian Hospitals. *Worldviews on Evidence-Based Nursing*. 2011;8(3):166-76.
27. Barakat-Johnson M, Barnett C, Wand T, White K. Knowledge and Attitudes of Nurses Toward Pressure Injury Prevention: A Cross-Sectional Multisite Study. *Journal of wound, ostomy, and continence nursing : official publication of The Wound, Ostomy and Continence Nurses Society*. 2018;45(3):233-7.