

Online Psychoeducation as an Alternative for Family Caregivers of People with Dementia in Rural and Urban Indonesia: A Narrative Review

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ABSTRACT

Indonesia is ageing rapidly, with 11.93% of people aged 60 years or over in 2025 and 20.9% projected by 2050. Estimates of people with dementia range from about 1.2 million to more than 4 million, and families provide most care. Support is limited by an unevenly distributed and poorly trained primary care workforce and by specialist services concentrated in large cities. This narrative review, without systematic screening, examined online psychoeducation as an alternative or complement to onsite delivery for family caregivers of people with dementia in rural and urban Indonesia. Indonesian work consists of adaptation and development studies, including the iSupport adaptation and online home-care modules, and none has tested outcomes or compared online with onsite delivery. International evidence suggests caregiver benefits, especially from multicomponent programmes with professional input, but it comes mostly from higher-income settings. Internet use was 79.13% in urban areas and 63.71% in rural areas in 2024, and Puskesmas staff knowledge of dementia was low. Dementia is often seen as normal ageing (pikun), stigma is common, and family obligation and ethnic diversity shape care. Online psychoeducation is plausible but unproven and should not stand alone. A hybrid, culturally adapted approach with offline materials and facilitation by trained kader or Puskesmas staff is favoured, and pilot trials and primary care dementia training are priorities.

Keywords: dementia; caregivers; psychoeducation; online intervention; iSupport; Indonesia; rural health

INTRODUCTION

Indonesia's population aged 60 years and above reached 11.93% in 2025, according to Statistics Indonesia, and is projected to approach 20.9% by 2050 [19]. Reflecting this ageing, the number of people with dementia is expected to rise sharply. Alzheimer Indonesia and the Ministry of Health have long cited about 1.2 million people with dementia in 2016, rising to 2 million by 2030 and 4 million by 2050 [24]. A survey-based prevalence study (STRiDE) in Jakarta and Bandung reported much higher figures, with a weighted prevalence of 27.9% among people aged 65 and over, equivalent to more than 4 million people [25]. Caring for them falls mainly on families: the WHO notes that most people with dementia are cared for by unpaid carers, especially in low- and middle-income countries, with women providing about 70% of informal care, and in Indonesia the health system relies heavily on informal caregivers [1]. Caregiver burden is real but varies. In 207 caregivers in Java, mean Zarit Burden

Interview score was 30.43 out of 88 (low to medium), and higher burden was associated with behavioural and psychological symptoms, lower caregiver education, and less social support [13]. A Review also links caregiving stress to HPA-axis and immune dysregulation [2]. The WHO's Global Action Plan on dementia therefore targets training and support for carers, and its iSupport programme provides online training that countries can adapt locally.

However, delivering such support in Indonesia faces overlapping challenges. National workforce density is not the main problem: the aggregate density of doctors, nurses and midwives rose from 43.1 to 54.2 per 10,000 between 2019 and 2023, above the SDG threshold of 45.5 [4]. The problem is distribution and readiness. In 2024, only 56.4% of Indonesia's 10,195 Puskesmas had the required nine categories of health worker [4], and in Yogyakarta, health workers' knowledge of dementia symptoms was 15–37% [13].

Geography compounds this maldistribution. Indonesia is an archipelago of more than 17,000 islands, and development has been centred on Java, which holds about 70% of the population on roughly 7% of the land, leaving outer and eastern islands relatively neglected. In Maluku, for example, 65% of 207 Puskesmas had no physician, and some residents travelled over both land and water to reach the nearest clinic [22]. Specialised dementia services, including memory clinics, day care and professional home care, are concentrated in Jakarta and a few other large cities [21]. Caregivers outside major cities therefore depend on a workforce that is unevenly staffed and trained, and often far away. Online psychoeducation has been proposed to extend support beyond specialist centres. iSupport has been adapted to the Indonesian socio-cultural context, but access is uneven: 79.13% of urban residents used the internet in 2024 against 63.71% of rural residents [5,20]. Comparative evidence on online and onsite formats is inconsistent, and no randomised trial has tested delivery modality among Indonesian dementia caregivers.

This narrative review examines online psychoeducation as an alternative and/or complementary modality to onsite delivery for family caregivers of people with dementia in rural and urban Indonesia. It synthesises evidence on effectiveness, cultural adaptation and implementation, and identifies priorities for future research.

Psychoeducation Modalities and Online Delivery

Psychoeducation for dementia caregivers combines illness education, practical caregiving advice, behaviour-management training, coping skills and peer or group support [11]. It can be delivered in several ways. Onsite formats include group classes, individual sessions and home visits led by health professionals. Remote formats include telephone coaching, web-based modules, messaging platforms and mobile applications. Many programmes now blend the two, and these delivery routes differ in how much human contact they involve, which affects both cost and engagement.

Among online programmes, WHO's iSupport is the most widely adapted. A systematic review identified ten cultural adaptation studies, eight randomised trial protocols and two preliminary results. The adaptations mostly adjusted terminology, design and additional resources, and the protocols chose caregiver burden as the primary outcome. Preliminary results showed positive effects on caregiver mental health and well-being, but the authors describe the programme as still being implemented in different countries, so effectiveness is not yet settled. The Indonesian adaptation followed translation and cultural review, yet caregivers felt the behaviour-change content was too superficial to match their real experience [6].

Broader evidence on home-based digital interventions is encouraging for caregivers but uneven. A systematic review of 14 studies in 2026 found that caregiver outcomes showed the most

consistent benefits, including reduced burden and stress and improved self-efficacy. Multicomponent programmes combining caregiver education with professional feedback showed more durable effects. Reported adherence ranged from 65% to 85% and attrition from 8% to 25%, mostly because of caregiver time constraints or technological difficulties. However, the reviewed studies came from high-income and upper-middle-income countries settings, so they say little about Indonesia [7].

Additionally, human support appears to matter. In a Chinese cluster trial, iSupport was integrated with primary care teams and followed up through a messaging platform, and caregivers' learning behaviours improved, but differences in burden were not significant. Another trial with a self-guided arm found the programme feasible but not clearly superior to attention control. These examples suggest that online delivery is not automatically effective. Results depend on content, dose, facilitation and the setting in which it is used [10].

On the other hand, rural delivery adds its own constraints. A scoping review of telemedicine in rural dementia care, limited to high-income countries, mapped barriers and facilitators, including technology limits and how complex the intervention seems to users. In Indonesia, online programmes remain at an early stage. One Indonesian team developed online home-care modules for dementia caregivers from interviews with 15 caregivers, but this was development work and not an outcome trial [8].

Taken together, the evidence supports online psychoeducation as a plausible way to extend caregiver support, most credibly when it includes some human contact and is adapted to local culture. It does not show that online delivery is equivalent or superior to onsite delivery in Indonesia. Direct comparisons and trials in Indonesian settings are still missing [9].

Indonesian Cultural psychiatry perspective

Uptake of psychoeducation depends on how families understand cognitive decline, and in Indonesia that understanding is largely non-medical. In a survey of 4,430 members of the public, 86% had not heard of dementia or Alzheimer's disease and commonly viewed it as a normal part of ageing, and about three-quarters described symptoms as pikun (senile). In an ethnographic study across five sites, symptoms were attributed either to normal ageing (sakit tua) or to being gila (crazy). Under the first label, people are left to move freely and stay socially active, but they are not recognised as needing care. Under the second, isolation and neglect are more likely. Psychoeducation that begins with a biomedical explanation may therefore clash with existing explanatory models [12].

Stigma adds a second barrier. In a global survey, 44% of the Indonesian public believed people with dementia were dangerous, and 19% would keep a diagnosis secret. Family carers face discrimination

when dementia is labelled a psychiatric condition, they report guilt, fear and shame. When behaviour changes, some people with suspected dementia are kept behind locked doors. This suggests that caregivers may avoid programmes that explicitly name dementia or mental illness, and that content should address shame and community gossip directly [12].

Collectivist family norms shape who seeks help. Caring for older relatives is seen as a cultural expectation, and carers may feel obliged to care without seeking professional help. The primary carer is usually a woman, often a spouse or daughter-in-law, who juggles paid work, childcare and housework. Support from other relatives can reduce burden, and community members sometimes offer company and food. Psychoeducation that targets only one individual, without involving the wider family, may miss the people who share the caring [12].

Help-seeking also runs through traditional health services. Nationally, 33.6% of rural adults used them in 2018, and people aged 65 and over were more likely than younger adults to do so. This is general data on health services and does not show how dementia families behave. It does suggest that traditional providers may be trusted with entry points, and that programmes should work with them, not against them [13].

These reasons can differ across Indonesia's many communities. The country has about 1,340 ethnic groups and 2,500 local languages, yet online training for family caregivers has barely been developed for them [24]. In rural Java, for example, dementia is seldom seen as a disease. Families care for the older person according to Javanese custom and Islamic duty to parents, and they rarely consider nursing homes [23]. Even the choice of words matters. When iSupport was adapted, the team chose *pikun*, a familiar and less stigmatising term, and reviewers have urged versions in more local dialects [5]. Psychoeducation should therefore speak in the language, faith and family structure of each community, and not follow a single national.

Current evidence points to cultural and structural barriers, but direct comparisons of dementia beliefs between rural and urban Indonesia, and between ethnic groups, are lacking. Existing survey data compare Jakarta and North Sumatra and show more negative attitudes in North Sumatra, indicating regional variation but not separating the effects of ethnicity, rurality, religion, and education.

Rural vs urban

Rural and urban differences can also introduce another layer of variability. The ethnographic study covered a highland Sumatran village, a Jakarta neighbourhood, peri-urban Javanese sites and a remote East Nusa Tenggara Island, and it drew no cross-site comparisons. Primary healthcare for older people was better on Java, whereas distances to providers were greater on the remote island and in Sumatra. Sixteen of 18 Alzheimer's Indonesia

chapters are on the three most populous islands, mostly in large cities, and an estimated 88% of Indonesians lack access to dementia-specific services. Health volunteers (*kader*) had no dementia training and saw their role as moral support [12].

Most of the evidence describes these gaps in general terms and does not compare dementia caregivers from the two areas directly. Some notable differences that have been identified from the area include Digital access. Official statistics show a consistent rural-urban gap in internet use. According to the 2024 National Socioeconomic Survey (Susenas) analysed by Statistics Indonesia (BPS), 72.78% of the population accessed the internet in 2024, up from 69.21% in 2023 [20]. The figure was 79.13% in urban areas and 63.71% in rural areas, a gap of about 15 percentage points. Mobile phone ownership showed a similar but smaller pattern, at 95.11% of urban households and 89.80% of rural households. These population-wide figures understate the barrier for the people most relevant here. Older adults appear to lag well behind one secondary summary reports that about 49.5% of older people hold a mobile device but fewer than 20% can use the internet independently. The gap is also not only about signals.

Workforce and services. Indonesia has about 41 health workers per 10,000 people, and health worker and specialist training are concentrated largely in urban centres. Rural areas also face misdiagnosis or under-recognition of dementia. In an ethnographic study, primary health care for older people was better on Java, while distances to providers were greater on a remote East Nusa Tenggara island and in Sumatra. Dementia-specific services, such as the Alzheimer's Indonesia chapters, are mostly in large cities on the three most populous islands [12].

Primary Care Capacity and Care Pathways. Indonesian policy gives Puskesmas a formal role in older-adult care, but the evidence suggests that dementia-specific capacity lags behind it. Ministry of Health Regulation 67/2015 sets out elderly health services at Puskesmas and includes guidance on dementia, including referral to community resources such as Alzheimer's associations, support groups and family meetings. The National Strategy on Ageing (Presidential Regulation 88/2021) is a reference for ministries and regional governments, and one of its five strategies is improving the health and quality of life of older people. In practice, a census of 121 Puskesmas in Yogyakarta found that knowledge of dementia symptoms among staff was low (15–37%), 58% had no dementia training and only 36% treated patients with dementia. 26% did not screen, 46% used the AMT and 9% used the MMSE, with mean coverage around 40% [14]. Managers cited limited resources (54%), low public knowledge from socio-cultural factors (50%) and poor access to facilities (37%) as reasons for low coverage. The authors note that older-adult programmes are not among Puskesmas essential health programmes, that staff are shared with other services, and that the 2016 National Dementia Plan [15].

A 2026 scoping review of 105 Indonesian dementia studies likewise found that research is concentrated in urban areas and that dementia remains poorly integrated into primary care. As a possible pathway, the Yogyakarta authors suggest task-shifting screening to community health workers (kader), but state that its effectiveness has not been evaluated [15].

DISCUSSION

This review examined online psychoeducation as an alternative to onsite delivery for family caregivers of people with dementia in rural and urban Indonesia. The main finding is that the case for it rests on need and plausibility, not on tested effectiveness. Indonesian work so far consists of adaptation and development studies. The iSupport adaptation done by Turana(2023) was received positively, but its authors called for evaluation of efficacy, and the online home-care modules developed at the University of Indonesia reached 92.79% content validity without testing outcomes [5]. Online delivery is therefore best described as an alternative where onsite services are unavailable, not as a replacement.

The rural-urban comparison explains why the alternative matters. Internet use was 79.13% in urban areas and 63.71% in rural areas in 2024, and primary care is under-prepared. In Yogyakarta, staff knowledge of dementia symptoms was low, and screening coverage was limited by resources. A 2026 scoping review likewise found that Indonesian dementia research is concentrated in urban areas and that dementia is poorly integrated into primary care [15]. Evidence on rural telemedicine in high-income countries points to similar barriers, namely connectivity, digital literacy and caregiver capacity, but cannot be transferred directly to Indonesia [8]. These findings favour a hybrid design. The iSupport adaptation recommended printable versions for regions with low bandwidth, shorter lessons, more illustrations and a local cadre as the contact point [8]. Human support also appears to matter: a 2026 systematic review found that multicomponent digital programmes with professional input showed more durable benefits for caregivers [7]. In Indonesia, trained kader or Puskesmas staff could fill that role, although the Yogyakarta authors note that task-shifting has not been evaluated.

Cultural psychiatry adds a further layer, and the Indonesian evidence comes from several designs that point the same way. In a cross-sectional survey of 4,430 adults in Jakarta and North Sumatra, 86.3% had not heard of dementia or Alzheimer's disease and commonly viewed dementia as normal ageing [16]. Attitudes were generally positive, but older age, less than primary education, incorrect beliefs about causes, and living in North Sumatra were associated with more negative attitudes [16]. Ethnographic work in the *Journal of Cross-Cultural Gerontology* describes pikun as the everyday label for functional change, labels such as "crazy" in the community, and family guilt, fear, and shame [12]. A phenomenological study of 15 family caregivers found that stigma, low community awareness and health workers' limited dementia knowledge were

barriers to care, while support from relatives, other caregivers and NGO education reduced the burden [17]. Family obligation appears to shape care as well: in a study of 100 families in four Surabaya Puskesmas, filial values and the family's assessment of care needs affected the ability to provide home care.

Indonesia's ethnic and linguistic diversity suggests that these beliefs and obligations are unlikely to be uniform. A small qualitative study in rural Java, for example, linked care to Javanese custom and Islamic duty to parents [Winarni and Triratnawati 2023], and the iSupport adapters acknowledged that a single national version cannot represent every local culture [5]. However, we found no study comparing dementia beliefs or programme uptake across ethnic groups, so the role of ethnicity remains an inference and not an established finding.

Taken together, these findings suggest that content opening with a purely biomedical explanation may clash with how families understand symptoms [18]. Programmes should therefore address stigma directly, build on existing family and NGO support, and involve the wider family, not only one caregiver. Because attitudes varied by region and education in the survey, rural and urban settings should not be treated as uniform.

CONCLUSION

Online psychoeducation is a plausible but unproven alternative for family caregivers of people with dementia in Indonesia, most relevant where onsite services are scarce. Rural areas face lower internet use, a thinly trained primary care workforce and cultural barriers such as the view of dementia as normal ageing (pikun), stigma and strong family obligation, so online delivery cannot stand alone. The evidence supports a hybrid, culturally adapted approach with short visual lessons, offline or printable materials, facilitation by trained kader or Puskesmas staff, and involvement of the wider family. Indonesian work to date consists of adaptation and development studies, and no trial has compared online and onsite delivery or tested rural-urban differences, while the rural evidence here is largely inferred. Pilot trials in both settings, using caregiver burden and usage as outcomes, together with dementia training for Puskesmas staff and kader, are therefore the priorities before online psychoeducation is scaled in national programmes.

Limitations and Recommendations

This is a narrative review without systematic screening, so selection bias is possible. No Indonesian trial compares online and onsite psychoeducation, and the rural evidence is largely inferred from national statistics and non-dementia studies. The cultural evidence comes from a survey in two regions, a small qualitative study, and one ethnography, so the findings are suggestive and not representative. Future research should pilot hybrid programmes in both urban and rural settings and report usage and attrition. Policy attention should go to dementia training for Puskesmas staff and kader, since this would make any online programme workable.

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