

Pressure injury education for older adults and carers living in community settings: A scoping review

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Abstract

Older adults are at increased risk of pressure injuries (PIs) due to age-related changes. Traditionally, PI knowledge and education have been delivered in hospitals and residential aged care facilities, however, there remains a critical gap in understanding how PI knowledge on prevention and management is shared with older adults and their carers living in the community. We aimed to describe the nature and characteristics of structured and unstructured PI education programs available to community-dwelling older adults and their carers. A scoping review was undertaken. We searched five databases: CINAHL, Medline, Scopus, Cochrane Library and ProQuest from 2009 to August 2023. The review was guided by Arksey and O'Malley's six-step framework and adhered to the PRISMA-ScR guidelines. It included primary peer-reviewed papers published in English, which focus on PI education for older adults and/or their carers living in community settings. Data extraction was organised in a table, and findings presented as a narrative summary. One-hundred and thirty-six papers were screened and four included in the review. Results indicate that consideration was placed on literacy levels and cognitive status of older adults and their carers when designing PI education materials. Educational materials such as leaflets/brochures, in-person training sessions or a combination of both were used. However, duration of these interventions varied, lasting for 1–4 weeks while others were completed over 12 months. Some improvements in PI knowledge such as how to treat PI, dietary requirements and importance of mobility were noted. However, information retention and its translation into effective long-term behaviour change remained unclear. In conclusion, adopting a multifaceted educational approach increases the effectiveness of PI knowledge translation. Continuous education, support and reinforcement on PIs over time are necessary when interacting with older adults and caregivers to ensure long-term management and prevention success. Conversations on PIs should start at the primary care levels when older adults and carers are visiting their GP clinics and accessing support services for other

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healthcare needs. Understanding older adults' and carers' literacy levels, cognitive status and cultural background can assist clinicians in designing and delivering fit-for-purpose PI educational interventions that are accessible, relatable and effective in promoting knowledge transfer and behaviour change. Carers are vital conduits in the care continuum. These factors will lead to a more informed, collaborative and person-centred approaches to PI management and prevention.

KEYWORDS

carers, education programs, older adults, pressure injury, prevention and management

Key Messages

- A scoping review was undertaken to describe the nature and characteristics of structured and unstructured pressure injury education programs available to community-dwelling older adults and their carers.
- To date, limited studies have explored the effectiveness of pressure injury educational resources provided to community-dwelling older adults and its impact on sustained behaviour change on pressure injury management and prevention.
- Adopting a multifaceted educational approach increases the effectiveness of PI knowledge translation. Continuous education, support and reinforcement on PIs over time are necessary when interacting with older adults and caregivers to ensure long-term management and prevention success. Conversations on PIs should start at the primary care levels when older adults and carers are visiting their GP clinics and accessing support services for other healthcare needs.
- Understanding older adults' and carers' literacy levels, cognitive status and cultural background can assist clinicians in designing and delivering fit-for-purpose PI educational interventions that are accessible, relatable and effective in promoting knowledge transfer and behaviour change. Carers are vital conduits in the care continuum. These factors will lead to a more informed, collaborative and person-centred approaches to PI prevention.

1 | INTRODUCTION

Pressure injury (PI), also known as pressure ulcer, is defined as a breakdown of skin integrity as a result of pressure or pressure with shears.¹ The prevalence of PI has increased in recent years and is a common complication among hospitalised adults.² While there has been no significant reduction in PI incidences,³ it continues to plague the healthcare system with its heavy financial burden. The high financial cost is often the result of the chronic nature of wound treatment,⁴ which often involves physical restrictions, discomfort, pain and reduced quality of life.⁵ Healthcare systems across the United States, Canada, the United Kingdom and Australia have reported significant costs in addressing the incidence of PI.^{6–9} In Australia, Nghiem et al.¹⁰

reported care of patients with PI cost up to \$10 billion to the public hospital system, becoming one of the leading public health issues. Preventing incidences of PI is, therefore, a priority. In enabling prevention, strategies need to be in place that are effective, efficient and accessible to the most vulnerable to PIs—our older adults and their carers living in the community.

One of the widely accepted preventative measures in PI is patient education.^{11,12} Patient education has now become standard practice for hospitals and is recommended by the National Pressure Injury Advisory Panel (NPIAP), the EPUAP and the Pan Pacific Pressure Injury Alliance (PPPIA) for effective treatment of PIs. These associations suggest that the measure of success in patient education is in improving patient and carer knowledge and skills in managing PI, as well as patient

behavioural change associated with prevention, improvements in quality of life and evidence that the education programme has reduced or prevented the incidences of PI.¹² The objective is also to focus on providing information that encourages active engagement in patients' self-care and decision-making.¹³

Despite these recommendations, a study by Team et al.¹⁴ identified deficits in the uniformity and quality of patient education in the prevention of PIs. Durrant et al.¹⁵ also found that educational materials, such as leaflets, which may contain useful guidelines, have not led to promising outcomes due to a lack of patient engagement. This raises questions about the strategies used in educational interventions of PI prevention and management that healthcare professionals have sought to deliver to patients. Although structured educational interventions have been found to help improve the incidences of PIs,¹⁶ it is unknown whether such education programs exist in community settings. The aim of this scoping review is to explore and describe the nature and characteristics of structured and unstructured PI education programs on care and prevention of PIs available to community living patients and their carers. Additionally, the review also aims to understand how older adults and their carers in community settings utilise these educational programs.

2 | BACKGROUND

Typically, PIs are categorised into four stages, where stage 1 represents erythema/redness of the skin; stage 2 is erythema with the loss of partial thickness of the skin; Stage 3 shows full thickness ulcer likely to involve the subcutaneous fat and stage 4 is essentially Stage 3 with involvement of the muscle or bone.¹ Any depth of the PI/ulcer that is obscure is categorised as unstageable.^{1,16} Older adults are at greater risk of PI due to the process of aging and the vulnerability of their skin integrity.¹⁷ Other factors influencing the vulnerabilities of older adults include reduced mobility, decreased sensation, poor circulation, reduced nutritional intake or absorption and underlying health conditions.¹⁸ The prevalence of PIs among older adults is relatively high, in particular, those living in long-term care facilities and independently in the community.¹⁹

While there are several positive factors driving the move to independent living, similar to those living in long-term facilities, these older adults are more susceptible to the risk of PIs.²⁰ A critical factor is access to home support and resources such as specialised equipment required for proper PI prevention¹⁷ and the care and

surveillance of trained healthcare professional staff.²¹ External environmental factor such as cost of living also impacts on how older adults support their minimal nutritional needs and manage living in the community.²²

The increasing preference for older adults to live independently in the community in recent years has also led to more demand for the care delivered by the healthcare professionals or family caregivers. McGraw²² reports that the knowledge and skills of caregivers have not been able to meet the demand of care required by patients in the community. Taylor et al.²¹ also found that staff shortages and high workloads of healthcare professional staff working in community settings are limiting the opportunity to provide education to patients and their caregivers. Such limitations indicate that educational information supporting the management of PI requires further scrutiny and refinement to ensure its effectiveness.

Health literacy is an important element of care for older adults living in the community, in particular, in preventing PIs.¹² Improving health literacy in this area can help enhance the quality of life for the older adults in several ways. It can help improve nutrition, skin care and the importance of maintaining mobility to reduce the risk of developing PIs.⁵ It can also empower older adults to recognise early signs and symptoms of PIs and seek medical attention early.²³ Appropriate health literacy can also ensure improved communication between healthcare professionals, patients themselves and the family caregivers.⁵ The challenge of health literacy is in the development of quality education materials and tools in ensuring the prevention of PIs of older adults in the community.

Addressing these challenges requires a comprehensive approach involving healthcare professionals who can provide care and education to older adults in the community,²¹ and patients and their caregivers prepared to engage in education. These professionals and patients and their carers need to work collaboratively to improve PI prevention. This study aims to describe how older adults and their caregivers in community settings utilise the educational tools in PI management. Understanding this can help inform the nature and characteristics of structured and unstructured PI education tools that will contribute to the advancement of PI knowledge.

3 | AIM

The aim of this scoping review is to describe the nature and characteristics of structured and unstructured PI

education programs on care and prevention of PIs available to community living older adults and their carers.

4 | DESIGN

A scoping review was undertaken using Arksey and O'Malley (2005)²⁴ framework. Scoping reviews are a methodological approach that facilitates the systematic gathering of existing literature with the primary objectives to clarify key concepts, identify sources of knowledge or practice gaps and provide direction for future research.²⁴ We adhered to the PRISMA-ScR guidelines and registered the protocol with PROSPERO on 6 April 2023 (no: CRD42023409327).

4.1 | Search methods

The following research questions guided the development of the search strategy:

1. What is the impact of structured and/or unstructured patient education on PIs for community living older adults and/or their carers on their knowledge, participation/engagement, wound progress/prevention/management and quality of life?
2. What is the mode of delivery, nature and content of the resources or educational programs offered to community-based older adults and their carers accessing healthcare services and/or being discharged from hospitals to facilitate the prevention/management of PIs.

The PIO framework was used where the P—population included older adults with PI stage I to IV or who were at risk of developing PI and/or carers of older adults living in community settings; I—intervention included structured and unstructured patient education/resources/programs on PI provided in community settings and O—outcome included knowledge, participation/engagement, wound progress, prevention/management and quality of life.

We searched five databases: CINAHL, MEDLINE, Cochrane Library, Scopus and ProQuest. A librarian was consulted regarding the search terms and conducted the search. The following keywords were created with Boolean operators AND, OR and MESH terms to run the database search: educational intervention/programs/resources, health literacy, engagement, participation, patient education, patient-centered, patient-related, outcome, pressure injury/sores, quality of life, wound care, wound healing, elderly, older adult*, carer*, community,

TABLE 1 Inclusion/Exclusion criteria.

Inclusion criteria	Exclusion criteria
<ul style="list-style-type: none"> • Primary peer-reviewed literature 2009—12 August 2023. The start date has been chosen as 2009 as the first edition of the International Guidelines on Prevention and Treatment of Pressure Ulcers/Pressure Injuries was published in 2009 (Thomas, Chui, Yahya, & Yap, 2022b) • Published in English language • Full text article • Older adults (65+) living in community settings with PI or at risk of PI • Carers of older adults with PI or at risk of PI • All research designs: qualitative, quantitative, mixed methods studies • Discusses structured and unstructured PI educational programs/resources/ on PI management/prevention or care 	<ul style="list-style-type: none"> • Patients under 65 years of age • The studies that were not clear on the population serviced • Studies not in English • Studies published before 2009 • Literature reviews including systematic reviews, scoping reviews, integrative reviews and meta-analysis • Conference papers, editorials, discussion papers and dissertations • Unpublished works • Protocols, guideline documents and grey literature

home-based, home, community dwelling, prevent*, manag*.

4.1.1 | Inclusion and/or exclusion criteria

Table 1 highlights the inclusion and exclusion criteria.

4.2 | Search outcome

A total of 136 papers were retrieved and uploaded into the online software programme, Rayyan²⁵ for systematic screening. A blinded independent screening process was completed by first two authors (AS, EW), and conflicts were resolved through discussion and moderation with a third reviewer (SY). Following removal of 55 duplicates, 81 titles and abstracts underwent initial screening from which a further 74 were excluded as not meeting inclusion criteria. These papers were either, in hospital interventions, lacked an intervention, were on a broad range of rehabilitation interventions or were systematic

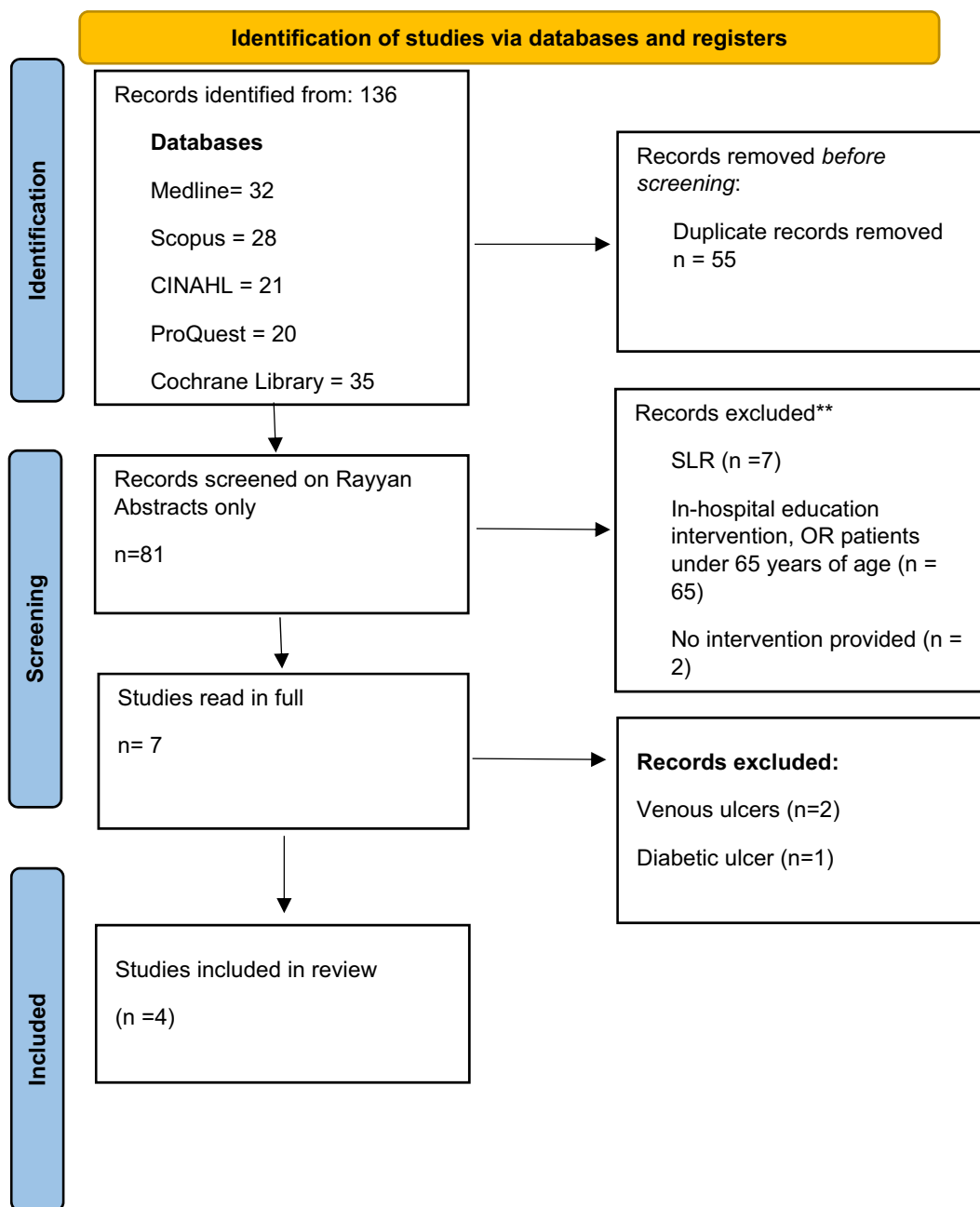


FIGURE 1 PRISMA.

literature reviews. The remaining studies underwent full-text review by both reviewers (AS, EW) and another three were excluded through this process, leaving four papers for final inclusion after the initial review. Figure 1 provides the PRISMA overview.

4.3 | Quality appraisal

Data were extracted into an Excel Spreadsheet for detailed analysis. As recommended by Cooper et al. (2021)²⁶, a quality appraisal of included studies was

conducted. The Critical Appraisal Skills Programme²⁷ checklists for evaluating research were undertaken. No studies were excluded from the review based on the results of the quality appraisal.

4.4 | Data abstraction

At full-text stage, reviewers EW and AS familiarised themselves with the included papers. We pilot tested the Microsoft Excel data extraction tool using two randomly included papers. Adjustments were made following all

reviewer feedback and categorised under the following headers: author, year of publication, country, study design, study aim/focus, population of interest, educational interventions used (including resources and programs), outcomes (including details on engagement, participation, improvements in knowledge) and study limitation. Data extraction was completed by reviewer EW, checked and confirmed by AS.

4.5 | Synthesis

Data extraction was organised in a table, and the findings are presented as a narrative summary highlighting the nature and characteristics of PI educational interventions used in community setting and the outcomes identified as likely to impact on engagement, participation and overall knowledge and understanding of PI management and prevention among older adults and their carers living in community settings.

5 | RESULTS/FINDINGS

A total of four studies were included in the final review. The studies drew on a variety of quantitative methods. These were from two randomised controlled trials,^{28,29} a prospective quasi-experimental design³⁰ and a pre-post-test intervention.³¹ All four studies sought to educate patients or caregivers on PI prevention.²⁸⁻³¹ Issues for future research are identified under the headings of population, process and delivery of programme, intervention, outcomes and limitations.

5.1 | Population

Accessing older adult patients and carers in community settings to provide educational programs presents several challenges, with the primary hurdle being the recruitment of sufficient participants given the intensity of the intervention and the chronic illness of this population. In the interventions retrieved from this review, participant numbers ranged from 24 to 64 in a study conducted in Ireland.²⁹ The Irish interventions were able to recruit and engage participants through community clinics and day centres as accessible participant pools, thus reducing travel time for clinicians and increasing participant numbers.^{29,30} The challenge of maintaining a substantial participant count is exacerbated in pre- and post-tests and RCTs due to factors such as changes in older adult's cognitive status, deteriorating health conditions, transfer to residential aged care or mortality, often bringing

numbers down to below 20.³¹ Despite these challenges, Shanley et al.²⁹ successfully recruited and retained 64 participants, with only one drop-out during the 20-day intervention period. Table 2 summarises population numbers, age and gender details.

5.2 | Process and delivery of programs

As noted above, one of the major difficulties in providing education to community-dwelling adults is the time taken by clinicians in travelling to the patients' home to deliver the programs. Among the four studies retrieved, two drew on participants who visited a community clinic on a regular basis, while the other two studies set a limit on the distance travelled by the clinician/educator. Of note, one study was conducted in India, where the population serviced was geographically dispersed,²⁸ while the other study was conducted in Hongkong, where the carer population was multi-lingual. Two studies focussed on the educational needs of carers,^{28,31} while the other two focussed on the patients/older adults living in the community. In the case of patients, inclusion criteria addressed their capacity to engage, often evaluated through a mental test,^{29,30} or the risk of developing a PI.³¹ Studies measured PIs using a standardised checklist such as Pressure Ulcer Knowledge test³¹ or employed measures of independent living combined with the use of the Braden scale.²⁸ Given the authors of the studies commonly used pre-and post-tests, some attrition was noted; however, the losses were not extensive enough to compromise the integrity of the results.

5.3 | Intervention

Educational interventions took various forms, encompassing the development and presentation of informational materials such as leaflets or educational package,^{28,30} training sessions on caring for or preventing PIs³¹ or a combination of both methods.²⁹ The temporal distinctions among these three approaches illustrate the challenges in training caregivers or patients. For example, Hartigan et al.'s³⁰ study was completed within 1 week as it was limited to a pre- and post-test where the patient's had to read a prepared leaflet while the study by Kaur et al.²⁸ was conducted over 12 months with significant follow-ups.

Greater emphasis on long-term compliance was evident in the study by Chong and Lee³¹ with follow-ups occurring at 2 and 4 weeks post the educational intervention. A key component in the preparation of patient or carer reading material was to determine a suitable

TABLE 2 Population numbers, gender, age and venue for intervention.

Author	Country	Sample size ^a (n = xx)	Gender M-F	Age of carers (C) Age of patient (P)	Home (H) or Centre © visit
Hartigan et al. ³⁰	Ireland	75–56	20–36	66–99 (P)	Yes ©
Chong and Lee ³¹	Hong Kong	24–18	14–10	55 (C) 82 (P)	Yes (H)
Kaur et al. ²⁸	India	78–32	43–35	19 (C) 95 (P)	Yes (H)
Shanley et al. ²⁹	Ireland	64–63	48–16	70–96 (P)	Yes ©

Note: xx represents the number populated for the subsequent rows.

^aIndicates the number of participants included in the study. The range is due to the nature of the studies being pre–post-tests.

reading age level for accessibility,³⁰ or addressing language barriers.³¹ In two instances, the written material was based on guidelines prepared by the EPUAP or NPUAP,^{30,31} with all four interventions drawing on expert clinical advice.

The efficacy of either providing educational material versus training in prevention was examined in one study,²⁸ while two studies ensured carer training and educational material employed an integrated approach.^{29,31} Educational training sessions typically involved a minimum of 1 h of instruction usually conducted by a trained registered nurse.^{30,31} In one study, nurses provided guidance through observation over several visits, offering tips on effective care using household resources.²⁸ All studies addressed identification, prevention and nutrition either in the educational material or in the training packages. Table 3 provides a summary of the methods and educational interventions used in the included studies.

5.4 | Outcome

The Hartigan et al.³⁰ study suggested some improvement in PI knowledge such as how to treat it, dietary requirements and movement following the distribution of informational leaflets. However, the authors describe these improvements as minimal, indicating uncertainty about the duration of information retention and its translation into effective behaviour change. Similarly, Chong & Lee³¹ identified increased knowledge in carers pre- and post-test including compliance rates. However, it is important to note that evaluation of compliance relied on a test rather than direct observations. No carer characteristics were associated with either high or low knowledge or compliance scores. The intervention conducted by Shanley et al.²⁹ was also limited to education with no observation of behavioural changes.

In contrast, studies incorporating hands-on training alongside educational components to carers revealed more nuanced results. Programs conducted by Kaur et al.²⁸ highlighted there was a reduction in the number of patients with bed sores and improvement in mobility levels for patient when knowledge was actively shared with the carers. Similarly, Shanley et al.²⁹ identified higher knowledge score post-intervention, which subsequently increased patient and carer skills and overall attitudes to PI prevention. Stanley et al. (2021) reported positive behavioural changes in the intervention group on nutritional intake drawing on the results of pre- and post-tests of 9.4%–22.6%, but none in the control group, with similar findings for fluid intake. Measures such as increased knowledge and shifts in behaviours such as the use of soap substitutes increased for the intervention group but remained static for the control group. While knowledge did increase for the intervention group, the authors indicated that retention and sustained behavioural might be challenging to achieve.

6 | DISCUSSION

This scoping review aimed to describe the nature and characteristics of structured and unstructured education programs aimed at preventing or reducing PI in older adults and their caregivers in community settings. It is noteworthy that the terms ‘pressure injuries’ and ‘pressure ulcers’ were used interchangeably in different studies based on the country where the study was conducted. Overall, all four studies reviewed indicate various effective education programs and materials for managing and/or preventing PIs/ulcers among older adults and caregivers from diverse backgrounds. However, the review reveals a critical gap that highlights the duration of information retention, long-term adoption and the translation of acquired PI knowledge into effective

TABLE 3 Data extraction.

Author	Aim	Method	Educational Intervention	Length of intervention	Sample size	Inclusion criteria	Exclusion criteria	Data results
Hartigan et al. ³⁰	To evaluate older adults' knowledge of pressure ulcers and prevention strategies following the introduction of an education leaflet	Quasi-experimental uncontrolled pre-test and post-test Pre-post-test—11 questions based on the EPUAP and National Pressure Ulcer Advisory Panel (NPUAP) and aligned to Leaflet Leaflet and pre-test guided by consultation with clinicians and consumers. Readability was calculated using Flesch–Kincaid Grade Level, score 5.5 Medley scale of pressure ulcer risk applied at time of pre-test	Patient Education Leaflet—designed using the principals of EPUAP and NPUAP. Leaflet details included definition of pressure ulcers (PU), diagram of body highlighting eight common areas for PU, strategies patients and carers can implement when area of a PU are identified, nutritional information. Leaflet was A4 size, Z-folded, order of text and diagrams were strategically positioned, sentences were concise and bullet points were used. Leaflet readability: age 8–10 years Following pre-test, patients asked to read leaflet	7 days	n = 75 completed pre-test; n = 56 completed both pre-and post-test	Attend community clinic once a week	Mental Test Score less than 7 out of 10	Findings indicate that printed leaflets increased patient knowledge of pressure injury

TABLE 3 (Continued)

Author	Aim	Method	Educational Intervention	Length of intervention	Sample size	Inclusion criteria	Exclusion criteria	Data results
Chong et al. ³¹	To evaluate the effectiveness of a home-based education programme in pressure injury prevention and management for caregivers of older adults	Quasi-experimental pre-test, post-test Pre-post-test intervention using the Pressure Ulcer Knowledge Test (PUKT) and Pressure Ulcer Advisory Panel checklist for compliance with pressure injury prevention and management (The National Pressure Ulcer Advisory Panel, nd). Cognition assessed—Abbreviated Mental Test, Daily functioning Modified Barthel Index Nutritional status through arm circumference and nutritional status assessed by mid-arm and	and post-test given on subsequent visit 1 week later. Use of NPUAP staging scheme and guidelines to develop education programme Activities were information on aetiology and risk factors of pressure injuries, skin care and assessment, selection and use of support surfaces, and demonstration of preventive measures. A pamphlet and instructions for pressure injury preventive measures were given to caregivers for reference. Post-test done using the PUKT with 10 true/false questions and Institute for Clinical systems	1-h programme at patient home Assessment at 2–4 weeks after education programme	$n = 24$ before education programme; $n = 18$ after education programme	Pressure injury Norton scale of <14 Mental health test	Norton scale less than >14 Not speaking languages of intervention Bahasa, Indonesian, Chinese and English.	Care givers knowledge of and compliance with best practice statistically increased after intervention on the PUKT test

(Continues)

TABLE 3 (Continued)

Author	Aim	Method	Educational Intervention	Length of intervention	Sample size	Inclusion criteria	Exclusion criteria	Data results
Kaur et al. ²⁸	To compare the effectiveness of two different training strategies for carers	Demographic data Two groups randomly assigned to Group A who received Prevention Package 1, which included self-instruction manual (SIM) training and counselling included details on positioning and posture of the patients and dietary needs. Group B received Prevention Package 2, i.e., only the SIM. During each follow-up, patients bed sore risk development was measured using Braden	Group A received SIM package and training in the issues in the SIM Group B only received the SIM package, but no training. A self-instructional manual (SIM) written in English and Hindi with information on prevention of PU developed from review of appropriate literature: definition of bed sore, development, common sites, early warning signs, stages, risk factors positioning	12 months with 22 follow-up visits across the year to test knowledge and retrain if required	$n = 78$ completed pre-post-test; $n = 39$ for Prevention Package 1 and 2	Focus on training carers Patients living within 30 KM radius and bedridden, for last 15 days and required assistance to get out of bed	Patients outside 30 KM radius Patients not bedridden	Reduction of number of patients at risk for Braden Scale increased for Group A compared to Group B across all visits. Mobility improved 100% in both A and B groups, scores higher for Group A (85%–75%). 100% care givers compliant.

TABLE 3 (Continued)

Author	Aim	Method	Educational Intervention	Length of intervention	Sample size	Inclusion criteria	Exclusion criteria	Data results
Shanley et al. ²⁹	To explore the impact of the Shanley Pressure Ulcer Prevention Programme (SPUPP) on older persons' knowledge of and attitudes and behaviours towards PU prevention	Multi-centred RCT single blind 9 sites with 8 days of attendance Demographic data KRUP pre and post test Malnutrition Universal Screening Tool	The Shanley Pressure Ulcer Prevention Programme (SPUPP). SPUPP is a multimedia programme electronic media, hard copy materials, activities and patient diaries. Programme developed with multi-disciplinary team. Programme includes tissue viability, physiotherapy, dietetics, five sessions: (1) overview, (2) skin care, (3) prevention of PU, (4) nutrition	Five sessions over 5 weeks	$n = 64$; $n = 32$ – control; $n = 32$ – intervention	Reduced mobility (because of any cause) as described by the functional independence measure (FIM TM). Required an assistive device, more than reasonable time, or there are safety (risk) considerations. Living independently in the community. Aged 65 years or older provided written informed consent.	Living in a long-term facility or a nursing home. Under 65 years Cognitively impaired In another research project. Did not provide consent.	Pre-test scores same for both groups. Post-test, mean scores for the intervention group 16.87 (SD: 1.88) and 12.41 (SD: 3.21) for control group and statistically significant, as $t = 6.76$, $p = 0.0001$

(Continues)

TABLE 3 (Continued)

Author	Aim	Method	Educational Intervention	Length of intervention	Sample size	Inclusion criteria	Exclusion criteria	Data results
			and (5) incontinence. Programme delivered one to one to patients with carers welcome. Summary sheets provided with activities for between sessions					
			Pre- and Post-test Knowledge Pressure Ulcer Prevention (KPOP) developed by author					

behaviour change among older adults and their caregivers remain unclear.

All four studies designed and developed their PI educational material by referring to the EPUAP and NPUAP guidelines. This highlights the significant impact of these peak body guidelines in promoting evidence-based education on PIs. The studies emphasised the importance of considering the literacy levels and cognitive status of older adults and their caregivers when designing PI educational materials. This highlights the need to tailor PI education programs to the specific health determinants and demographic characteristics of the target population, ensuring the educational materials developed are 'fit-for-purpose'. This aligns with the World Health Organization (WHO) recommendations, which state that it is vital for healthcare professionals to be responsive to client needs and provide enabling environments that allow people to access and/or seek information, understand and appraise and remember to use the information in their daily lives.³²

Notably, studies that incorporated a mixed educational approach such as written materials complemented with hands-on training provided a more personable experience and were more successful. However, PI resources that exclusively offered pamphlets or leaflets were not as effective as older adults and the carers did not have the same opportunities to practice their skills they have learnt under expert guidance and mentorship. Findings indicate adopting a multi-faceted approach to promote PI knowledge and understanding increases its translation and effective implementation and practice. Therefore, continuous education, support and reinforcement of PIs over time are necessary when interacting with older adults and caregivers to ensure long-term management and prevention success. This aligns with the study by McEwan, Rhodes and Beauchamp³³ who suggest that although interventions and strategies are provided to a population, most do not lead to sustained behaviour change.

Addressing the challenges associated with maintaining health-promoting activities in frail older adults is crucial. As older adults become less mobile, discussion and awareness of PI information need to be continued to prevent PIs. Therefore, future studies within this space need to evaluate both the duration and quality of in-homecare educational programs for older adults. For example, the two programs conducted in Ireland^{29,30} highlight the advantages of running community-based clinics. Patients visiting the clinics benefited from asking follow-up questions, which showcased that they are actively thinking about PIs and maintaining their skin integrity. Understandably, this opportunity to visit the clinics may not be feasible for all community-based patients as some may be bed bound and/or have other physical and economic challenges such as finding transport to visit clinics.

Nonetheless, the Irish model challenges the conventional approach where clinicians visit homes to provide education. This potentially reduces the costs for travelling for clinicians to provide in-home education, which means the provision for longer and sustainable delivery of educational programs, with older adults who are able to attend a clinic, taking charge and ownership of their overall well-being. This suggests that PI educational programs should not be offered in a vacuum but need to be part of a wider and more comprehensive approach.

This review also highlights the important role of caregivers as vital conduits in managing and preventing PIs in older adults. Engaging caregivers becomes particularly important when communicating with older adults with multiple chronic comorbidities, as they can easily become overwhelmed in managing several aspects of their health and well-being. This, in turn, can make it difficult for older adults to take charge and effectively manage elements such as their skin integrity and understand the links to PIs and subsequent ripple effects or overall exacerbation of other conditions.

Moreover, given there were only four studies from different geographical and socio-cultural backgrounds and settings that specifically explored PI educational interventions for community-dwelling older adults and their carers, more information on cultural factors is required. For example, health behaviours and knowledge adoption can be impacted by various factors such as cultural processes, traditional beliefs and values. In such cases, Osbourne et al.³⁴ emphasise the importance of considering individual's social practices as individual worldviews can influence their ability to acquire knowledge, personal skills and confidence in using health information. The authors state influences such as culture, traditions including taboos about health can form potential barriers to implementing and sustaining health behaviours in a population.

Given the review only identified relevant studies from three countries (Ireland, Hongkong and India), this highlights a critical gap in literature on global research initiatives regarding the interventions and strategies for PI prevention, management and education among community-dwelling older adults and their caregivers. More diverse research efforts are needed globally to understand how PI knowledge is held, exchanged and acted upon, ensuring collective efforts to raise awareness in our communities.

7 | CONCLUSION

This scoping review contributes to our understanding of PI/ulcer prevention and management in older adults and carers of diverse backgrounds living within community

settings. It highlights the vital role of designing and implementing fit-for-purpose educational interventions that are not only informative but also accessible and relatable for older adults and their carers when aiming to enhance their knowledge on management and prevention of PIs/ulcers.

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CONFLICT OF INTEREST STATEMENT

The authors declare no conflicts of interest.

DATA AVAILABILITY STATEMENT

Data available on request from the authors. The data that support the findings of this study are available from the corresponding author upon reasonable request.

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