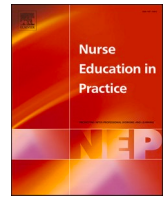


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Facilitating intergenerational learning between older people and student nurses: An integrative review

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ABSTRACT

Aim: To examine the literature on intergenerational learning between older people and student nurses.

Background: Intergenerational activities offer opportunities for intergenerational learning and help reduce ageism. There are several older person/school children intergenerational learning initiatives. However, there is less known about how intergenerational learning occurs in nurse education programmes outside of service provision. **Methods:** Whittemore and Knaf's (2005) integrative review framework was used to guide the review process. Population, intervention, context and outcome (PICO) was used to develop the review question, search strategy and inclusion/exclusion criteria. Database (CINAHL, Cochrane library, Medline, PubMed, Scopus and PsychInfo) searches and hand searching occurred from 2012 to 2023. Screening, appraisal and data extraction was undertaken according to Prisma guidelines.

Results: Nine papers were included (North American (n = 5), Canadian (n = 1) Chinese (n = 2), Taiwanese (n = 1)). Mixed methods designs were included. Four themes were identified: 1) Seeing beyond first glance; 2) Connecting and getting to know each other; 3) Learning together; and 4) Challenges for intergenerational learning.

Conclusion: This review demonstrates the relevance of intergenerational learning in nurse education and highlights the importance of embedding initiatives which will promote and support mutual learning. Innovative intergenerational initiatives enable students to explore their underlying attitudes and views in a way that they may not be able to in the more traditional service and care giving learning situations.

1. Introduction

"Intergenerational learning occurs when intergenerational projects or activities are purposefully planned to include one, or several, learning aims and outcomes across the generations, i.e. both sides learning from or with each other, to gain skills, values and knowledge" (Generations Working Together, nd: 5). Intergenerational activities help reduce ageism towards older people (Drury et al., 2017), these activities offer

opportunities for intergenerational learning. Lytle et al. (2020) agree that ageism is reduced through intergenerational contact. Intergenerational engagement is beneficial for older people and can result in social connections, improved cognitive functioning and improved sense of self-worth (Dinkins, 2019). Although there are several initiatives with older people and preschool, primary and post primary school pupils, learning and working together (Generations Working Together, nd 5), there are less so in nurse education. Outside of family relationships, most

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student nurse/older person interactions occur in service provision. Thus, students provide nursing care for older people who are ill and/or unwell and the relationship by its nature is one of carer and being cared for. However, there is less known about how intergenerational learning occurs in nurse education programmes outside of service provision. The aim of this integrative literature review was to examine the literature on intergenerational learning between older people and student nurses.

2. Method

There are many different types of reviews (Grant and Booth, 2009). An integrative review method was chosen for the following reasons: it enables gaps in the literature to be identified from a variety of sources and methodologies, its results provide comprehensive information, and it helps identify future research areas (Moloney et al., 2023; Dhollande et al., 2021; Whittemore and Knafl, 2005). An integrative review framework (Whittemore and Knafl, 2005) was used to guide the review process (Table 1).

3. Identify the problem

3.1. Review aim

Examine the literature on intergenerational learning between older people and student nurses.

3.2. Review questions

How is intergenerational learning between older people and student nurses taught and facilitated in nurse education and what intergenerational learning occurs?

The acronym, PICO was used to develop the review question (Table 2) and equates to population, intervention, context or comparison and outcome (Bethany-Saltikov, McSherry, 2016).

4. Literature search

The search strategy included identifying keywords and search terms, using Boolean operators (to broaden, ‘OR’; to narrow, ‘AND’; make more specific, ‘NOT’; to capture words/terms with spelling variations or using stems of words by using an asterisk * for wildcard searches), identifying inclusion, exclusion criteria and databases. Keywords formed the basis for identifying the search terms (Table 3).

Targeted searching of the literature is enhanced by clearly deciding on the inclusion and exclusion criteria (Bethany-Saltikov and McSherry, 2016). The inclusion/exclusion criteria are outlined in Table 4. Electronic databases (CINAHL, Cochrane library, Medline, PubMed, Scopus and PsychInfo) were searched as well as hand searching.

5. Screening

The search yielded 1266 citations. Duplicates were removed (nine).

Table 1
(Adapted from Whittemore and Knafl’s, 2005 framework).

No	Stage	Description
1	Problem identification	Identify the problem including concepts, population, health issue and sampling frame (i.e. empirical literature for this review)
2	Literature search	Use a well-defined search strategy with clear search terms, databases, inclusion and exclusion criteria to search the literature.
3	Data evaluation	Describe data appraisal methods
4	Data analysis	Describe the process of coding and categorising data
5	Presentation	Findings write up

Table 2
Review question formulation using PICO strategy.

P	Population	Older people and student nurses
I	Intervention/phenomenon of Interest	Intergenerational learning between older people and student nurses
C	Context	Nurse education
O	Outcomes	Define intergenerational learning Describe the outcome of intergenerational learning Identify the teaching methods and strategies Identify the facilitators and challenges

Table 3
Keywords and Search Terms.

Keywords	Search terms
Intergenerational Learning	(intergenerational learning)
Older People	(older AND adults OR elderly OR geriatric OR geriatrics OR aging OR senior OR seniors OR older AND people OR aged 65 OR 65)
Student nurses	(student AND nurses OR nursing AND students OR student AND nurse OR nursing AND students OR undergraduate AND nurse)

Table 4
Inclusion and exclusion criteria.

Criteria	Inclusion	Exclusion
Time frame	January 2011-March 2023	Before January 2011
Language	English	Not English
Type of literature	Empirical research	Commentaries Letters Grey literature
Population 1	Older people	Younger people*
Population 2	Student Nurses	Registered medical, allied health care personnel, nurses and midwives Medical and allied health care students
Phenomenon of Interest	Intergenerational learning between older people and student nurses	Intergenerational learning at primary and secondary education level
Context	Nurse education	Medical and allied health care education

1257 papers were screened on title and abstract with 1243 papers excluded. Full text screening of the remaining 14 papers resulted in five papers being excluded (lack of detail regarding student cohort breakdown, numbers, ethical approval and whether actual research had been undertaken). Search history is outlined in the Fig. 1. Prisma Flow Diagram. Independent screening by the reviewers was conducted throughout the process followed by discussion and mutual decision making when there was uncertainty.

6. Data evaluation

The research papers were appraised using Crowe Critical Appraisal Tool (CCAT) (Crowe, 2013). The CCAT appraisal form completion is guided by the CCAT user guide. There are eight categories and a total of 22 items of which each has a descriptor (Crowe, 2013). The overall score ranges from 0 to 40, scoring within each category is from a six point scale, ranging from 0 to 5 (Crowe, 2013). The final score is then converted to an overall percentage (Crowe, 2013). The scores of the nine appraised studies ranged from 80 % (32/40) to 97.5 % (39/40). All were included in the review and are outlined in the data extraction table (Table 5).

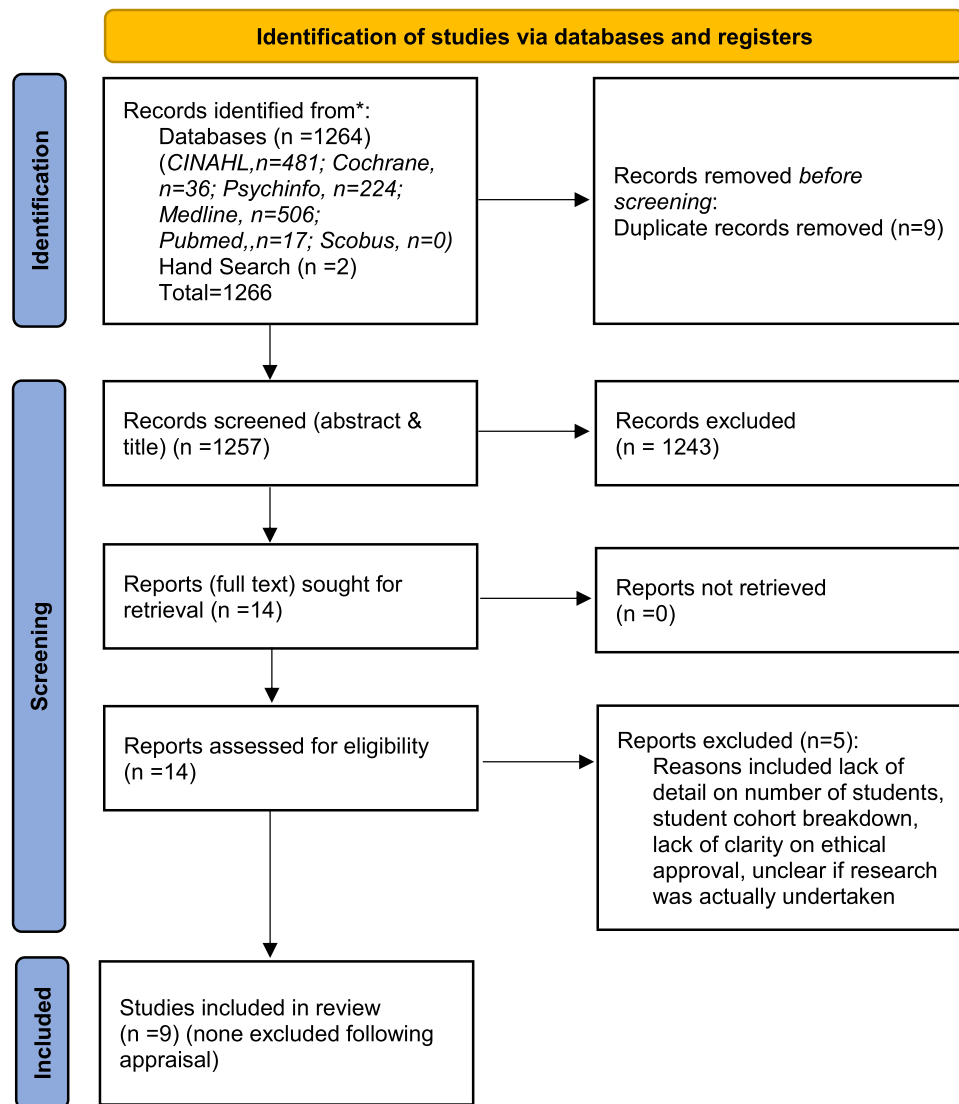


Fig. 1. Prisma Flow Diagram. *Consider, if feasible to do so, reporting the number of records identified from each database or register searched (rather than the total number across all databases/registers). **If automation tools were used, indicate how many records were excluded by a human and how many were excluded by automation tools. From: (Page et al., 2021).

7. Data analysis

An inductive approach, specifically thematic analysis was undertaken and was broadly guided by Braun and Clarke's (2006) six step framework. Both reviewers independently read the papers several times to become familiar with the data and made initial notes. The second stage: 'beginning to code the data' and linking extracts was independently done by each reviewer. The third phase was independently completed by each reviewer. It involved grouping codes according to similarity. Patterns were identified from these groupings and then, themes and sub-themes were organised and labelled. The fourth phase involved both reviewers coming together to review and agree the individual themes. During the fifth phase, the reviewers discussed and agreed the theme labels, making sure that the meaning of the themes were captured in these. The final and sixth phase was the 'write up' of the themes and presentation of the findings, followed by a discussion of these in the context of the wider literature.

8. Ethics approval

Ethical approval granted by the Research Ethics Committee,

University of Limerick.

9. Findings

9.1. Study characteristics

Nine papers were included, and they comprised North American (n = 5), Canadian (n = 1) Chinese (n = 2), Taiwanese (n = 1). The study designs included mixed methods (n = 1) quasi-experimental (n = 3), quality improvement project (n = 1) participatory action research (n = 1), illuminative evaluation using reflective journals (n = 1), practicum evaluation (n = 1) and exploratory descriptive qualitative (n = 1). Student participant numbers ranged from 12 to 210. Older people numbers ranged from 5 to 94. Four themes were identified.

9.2. Seeing beyond first glance

This theme (identified in nine studies) illustrates how intergenerational learning provides new insights about the ageing process and how ageing can be a positive experience. Students developed increased understanding of negative perceptions of age/ageing and demonstrated

Table 5
Data Extraction Table.

No	Title Author Year Country	Aim / Purpose	Study design Methods	Setting Population	Key findings	Quality Appraisal CCAT Score
1	Bowling, H., Murray, L., Eichler, T., Usher, B., Fennimore, L. (2021) Connecting Nursing Students and Older Adults: An Intergenerational Service-Learning Experience. Nurse Educator Mar 30th (10pages)	The purpose of this quality improvement project was to improve the attitudes of undergraduate nursing students toward older adults.	Students (N = 104) completed a minimum of 5 visits with an independent community-dwelling older adult. Student attitudes toward older adults were measured before and after the experience using the Polizzi Refined Aging Semantic Differential Scale. Student and older adult participants responded to satisfaction surveys.	The students were asked to select a community-dwelling older adult older than 65 years and living independently as a project partner. Students were not permitted to select family members to serve in this role	Statistical and clinically significant improvements in student attitudes were noted after the service-learning intervention	CCAT: 33/40, 82.5 %
2	Davies SM, Reitmaier AB, Smith LR, Mangan-Danckwart D. (2013) Capturing intergenerativity: the use of student reflective journals to identify learning within an undergraduate course in gerontological nursing. J Nurs Educ. ; 52(3):139-49.	The researchers adopted a collaborative approach, working with stakeholders (students, older adults, and faculty), to explore perceptions and experiences of the course, both to describe the impact and to identify and clarify the processes through which learning takes place. Analysis of student reflective journals as part of an evaluation of an undergraduate gerontological nursing course. The course aims to create positive learning experiences by involving older adults as partners in student learning. Older adults are recruited to receive visits from a designated student to share aspects of their life and experiences.	One hundred forty-eight students in two cohorts were eligible to participate in the study. The majority had commenced the 4-year nursing major directly after graduating from high school and were in the third year of the program at the time of data collection. Illuminative, emergent Analysis of 80 reflective journals completed by students Focus group interviews (n = 3) involving 19 older adult participants Interviews with older adult participants (n = 24) Interviews with students (n = 32) Modified framework analysis (Ritchie & Spencer, 1994) Comparison and integration of findings from different data sets	Student nurses in 3rd year of 4 year programme. Older adults are recruited to receive visits every 1-2 weeks from a designated student with whom to share aspects of their life and experiences. Students are provided with questions that relate to their learning in the theory component of the course to help guide their interactions with the older adult	4 key findings: 1. Becoming aware 2. Making connections 3. Seeing the unique person 4. Valuing intergenerational relationships	CCAT 37/40, 92.5 %
3	Eaton, J. (2015) The Feasibility of Ethnodrama as Intervention to Highlight Late-Life Potential for Nursing Students and Older Adults, Gerontology & Geriatrics Education , 36:2, 204-222	The purpose of this study is to evaluate the feasibility of using ethnodrama as an intervention to highlight late-life potential.	Twelve baccalaureate nursing students were paired with 12 residents of an assisted living facility to complete transformative learning activities	12 Student nurses and 12 residents of an assisted living facility were included in the study	Increasing discussion about late-life potential may alter the stigma associated with aging.	CCAT: 39/40, 97.5 %
4	Hwang, H-L., Wang, H-H., Lin, H-S. (2013) Effectiveness of Supervised Intergenerational Service Learning in Long-term Care Facilities on the Attitudes, Self-transcendence, and Caring Behaviors Among Nursing Students: A Quasi experimental Study Educational Gerontology , 39, 655-668,	To compare the effectiveness of intergenerational service learning in different types of facilities for nursing college students	A Quasi-experimental Study	126 student nurses	The findings of this study provide a foundation for service learning projects as an educational activity in long-term care courses for enhancing nursing students' caring practices, attitudes towards elders, and self-transcendence. Different facilities do have a different effect on students e.g. caring behaviours and attitudes higher in assisted living facility than in veterans' homes.	CCAT 35/40 87.5 %
5	Hwang, H-L., Wang, H-H., Tu, C-T, Chen, S., Chang, S-H. (2014) Reciprocity of service learning among students and paired residents in long-term care facilities Nurse Education Today 34, 854-859,	The aim of this mixed method design was to report the development of an intergenerational service learning project and to test its effects both on nursing students paired with residents and residents of facilities.	Mixed methods design A pre-and post-test with non-randomized control group design was used to evaluate the effects of the project on caring perceived by the residents, and a one-group pre- and post-test design was used to test its effects among nursing students	59 eligible residents and 210 nursing students	The project significantly affected the caring perceived by the residents and the achievements of the junior nursing students. This experimental study provides information of interest to nursing educators, long-term care administrators, and researchers in elderly care.	CCAT 35/40, 87.5 %
6	Jakubec, S.L., Szabo, J., Gleeson, J., Currie, G., Flessati, S. (2021) Planting seeds of community-engaged pedagogy:	The focus of this article is on the community engaged pedagogy within a	Participatory action research (PAR) Inductive, participatory, and qualitative methods, including participant	Older adults, nursing students in the second year of a four-year	The findings showcased here attest to how community-engaged pedagogy, in conjunction with PAR, can facilitate	CCAT 32/40, 80 %

(continued on next page)

Table 5 (continued)

No	Title Author Year Country	Aim / Purpose	Study design Methods	Setting Population	Key findings	Quality Appraisal CCAT Score
7	Community health nursing practice in an intergenerational campus-community gardening program Nurse Education in Practice , 51, (7pages) Kuo, Y-L, Lee, J-T, Yeh, M-Y. (2021) Intergenerational Narrative Learning to Bridge the Generation Gap in Humanistic Care Nursing Education Healthcare 9(10) 1291 https://doi.org/10.3390/healthcare9101291	community health nursing practice course To explore students' learning experience when providing humanistic care for older adults living with chronic diseases (using intergenerational narrative learning)	observations, interviews, and document analyses (of student proposals and reports), were established within the project Exploratory descriptive qualitative study design (using an open ended qualitative exploratory questionnaire). Thematic analysis was used to determine the findings.	undergraduate nursing program in their required CHN practice course. Purposive sampling of student nurses (n = 35) enrolled in a module on 'Nursing Care & Management of Chronic Disease' in a university in Taiwan. 33 female & 2 male students were recruited to the study	student learning outside of traditional settings and grow social inclusion, intergenerational connection, and social justice. Overarching theme is "awareness through learning". Three themes were identified: 1)Direct interaction supersedes knowledge in books 2) The framework for improving humanistic caring 3)Internalization of the importance of humanistic care in nursing	32.5/40 81.25 %
8	McCleary, R. (2014) Using Film and Intergenerational Colearning to Enhance Knowledge and Attitudes Toward Older Adults Educational Gerontology , 40, 414–426	This study evaluated whether two evidence-based methods used collaboratively, intergenerational colearning and use of films/ documentaries in an educational context, enhanced knowledge levels and attitudes toward older adults in nursing, social work, and other allied profession students.	A pre-test/post-test design was used to measure aging knowledge and attitudes toward older adults.	Participants of the 2011 film festival were 39 students, 22 from nursing (bachelor of science in nursing [BSN] program) and 17 from social work (MSW program) At the 2012 festival, there were 53 students, 32 nursing, 8 social work, 6 psychology, and 7 from a variety of other social science majors (child and family studies, criminal justice)	Significant increases were found in aging quiz and attitude scores. The combination of exposure to the documentary films and an intergenerational panel consisting of older adults leading a discussion of the films appears to have an immediate positive effect not only on knowledge of aging, but also on attitudes	CCAT: 39/ 40, 97.5 %
9	Reitmayer, A., Davies S., Smith LR, Mangan-Danckwart D., Hongerholt, K., Klinker, J. (2014) Discovering intergenerativity: an evaluation of learning partnerships between student nurses and older adults. International Journal of Older Person Nursing , 10, 115–126.	To explore the ways in which the practicum component of a course in gerontological nursing, incorporating sequential visits with an older adult, contributes to undergraduate nursing students' and older adults' understanding of experiences of ageing. To identify the benefits and challenges of participating in the course from the perspective of student nurses and older adults.	Design=Illuminative evaluation Methods Data were drawn from the experiences of two cohorts of students who completed the programme in 2010/2011. Semi-structured interviews were conducted with 32 students and with 22 older adults who participated in the programme. Eighty reflective journals completed by a sample of 59 students following visits with their designated older adult were also analysed. All data were analysed using the 'framework' approach.	2 cohorts of student nurses= 32 students 22 older adults	Results: Four shared themes were identified across the data sets: becoming aware of generational experiences, seeing the unique person, valuing the relationship and discovering intergenerativity. These themes illuminated the shared benefits of the practicum experience Implications for practice: Involving older adults as education partners in undergraduate nursing programmes has benefits for all participants and could form a valuable component of any undergraduate nursing programme	CCAT 39/ 40, 97.5 %

positive attitudinal change about ageing. This was achieved by looking deeper into older people's lives and experiences of older people, in essence it is seeing beyond the 'first glance'.

Hwang et al. (2013) identified a positive attitude change by students especially in the immediate post-test period in all three groups. However, at 16 months follow up, attitudes and caring behaviours were increased only in the assisted living facilities (AL) group, possibly because this group had more time to spend with students resulting in a positive effect on student attitude. Hwang et al.'s (2014) findings indicate that students' (post-intervention test) positive attitudes towards older people increased and this was attributed to increased student/older people communication and feeling more comfortable providing care. The concept that spending time with older people affords student nurses the opportunity to review their perceptions and attitudes towards older people is also evident in Jakubec et al.'s (2021) findings. Conversations with older people opened students' eyes to inequities and barriers experienced by older people by virtue of ageing and being older. Students developed insights into ageism and ableism.

Eaton's (2015) use of ethnodrama demonstrates how student perceptions about ageing became more positive when they spoke with older people about their (the older people) aspirations, views on life and the future. This project involved 12 student nurses and residents of an assisted living community collaborating to write a drama based on the residents' lives over a four month period. The positive effect of intergenerational connections on student nurses' attitudes was also evident in McCleary's (2014) film festival and intergenerational colearning project. All students had more positive attitudes post-test but interestingly student nurses had a lower mean score pre-test but the greatest post-test increase. While no specific reason was given for this, McCleary (2014) argued that sometimes, negative views can be linked to previous contact with older people who are sick and frail. Therefore, it may be that it is exposure to older people who are neither which promotes a more positive view of age and ageing. The impact of intergenerational relationships on changing perceptions and attitudes is also illustrated in Bowling et al.'s (2021) research, which showed an overall improvement in students' attitudes and in Davies et al.'s (2013) study, with students seeing older people as individuals rather than a homogenous group. Students became more aware of their stereotypes and biases. Reitmaier et al. (2014) found that students developed respect and admiration for older people. Similarly, Kuo et al.'s (2021) research identified that intergenerational narrative learning helped students to break through stereotypes about older people once they had listened to older people's life stories and experiences.

9.3. Connecting and getting to know each other

This theme (identified in eight studies) captures the fundamental building blocks to understanding and appreciating one another. It is through communicating, sharing life experiences and stories and making connections that people come to know one another. These are the cornerstones of intergenerational learning.

Focused service learning was the strategy used for intergenerational learning by Hwang et al., (2013, 2014) whereby student nurses met with older people to talk and share activities. Students were paired with older people from three different types of residential care unit for 60 min/week for 16 weeks. Hwang et al. (2014) describes reciprocity within service learning among students and long term care residents, specifically they report how sharing experiences and sharing memories was important to both cohorts. Furthermore, some older person participants reported feeling cared for and having an improved mood due to the social contact with students. In turn, students felt more comfortable caring for older people. Similarly, Jakubec et al. (2021) describe how a community garden programme facilitated social connection by having shared goals and a shared sense of purpose. Having a common sense of purpose can help develop camaraderie and a sense of ease, which helps people to get to know each other. The benefit of working together is also

highlighted in Hwang's et al.'s (2013) description of how shared artwork and recreational activities helped older people and students get to know each other.

Davies et al.'s (2013) analysis of student reflective journals demonstrates how intergenerational visits helped students and older people connect and get to know each other. The visits were mutually enjoyable and something to look forward to. Building on Davies et al.'s (2013) data on reflective journals, Reitmaier et al., 2014 compared three data sets, including the student reflective journals, student interviews and older person interviews. Findings indicate that both cohorts valued the older person/student nurse relationship and these (relationships) were identified as 'give and take' where 'both parties could contribute benefit' (Reitmaier et al., 2014:121). The resultant mutual understanding and reciprocity was identified as being good for both. Eaton's (2015) study also identified intergenerational similarities. Students recognised that their hopes and fears are like those of older people and this made students feel more connected to older people. The benefit of connecting and getting to know each was also echoed in Bowling et al.'s (2021) findings which emphasise the opportunity for increased socialisation and exposure for older people with students and how students appreciated and valued the experience. This intergenerational initiative was a minimum of five paired visits between older people living in the community and student nurses. The positive effect of exposure to older people and their lives was illustrated in Kuo et al.'s (2021) study. By meeting with and caring for older people, students developed a more personal understanding of the older people's experiences of living with a chronic illness and this in turn helped them (students) become more self-aware and empathetic (Kuo et al., 2021).

9.4. Learning together

This theme (identified in seven studies) demonstrates how mutual learning can occur when shared learning opportunities are facilitated. Learning is achieved through working in partnership, exploring and discussing views and topics and in reflecting on shared conversations and experiences. Through learning together, different perspectives can be presented, discussed and new insights developed.

An intergenerational visiting initiative by Davies et al. (2013) and Reitmaier et al. (2014) saw student nurses visiting older people one/twice a week for 16 weeks and discussing their (older people) experiences with them. Davies et al.'s (2013) described how students began to link their experiences of intergenerational learning with theoretical aspects of their studies. This enabled them to apply theory to practice and to develop their gerontological knowledge base. Furthermore, this study illustrates how students and older people through discussing their experiences, sharing their knowledge and insights developed shared learning. Reitmaier et al. (2014) analysis highlight how reciprocal learning occurred between students and older people. The effectiveness of intergenerational learning is illustrated in one of Kuo et al.'s (2021) main themes "direction interaction supersedes knowledge in books" as students felt they had a greater appreciation of the older people's experiences and humanistic caring in nursing.

Shared learning is also identified by Jakubec et al.'s (2021) community garden project. Second year student nurses from four cohorts, over a two year period worked with older people, other community dwellers and programme facilitators to develop a community garden. Concepts of social justice, social inclusion and community engagement underpinned the intergenerational campus-community garden programme. Student nurses also began to explore how nursing fits within community health and began to consider how nursing and their role as nurses assist in community development, building capacity and partnerships for sustainable healthy communities. Shared learning was supported by students and older people working together to develop skills and achieve goals. The merit of working together to facilitate learning is also evident in McCleary's (2014) film festival, with student nurses' knowledge of ageing increased, albeit only by 3.5 %. However,

what is important is that it did improve. This intergenerational film festival comprised students (nurses and other health/social care students) watching films on older people's experiences followed by a discussion with a panel of older people. The project provided some thought provoking moments e.g. LGBT issues for older people, something that had not been considered previously by students. Findings from Eaton's (2015) study concur, students developed new insights into the lives, wishes and dreams of older people. Reciprocal service learning was achieved in Hwang et al.'s (2014) study whereby, students felt more comfortable caring and felt that they met the residents' caring needs while older participants perceived higher caring.

9.5. Challenges for intergenerational learning

The main challenges were lack of time and lack of pre-requisite knowledge and understanding. There were, to a much lesser degree, challenges associated with the complexity of the innovation and negative commentary. Six studies identified challenges.

Lack of time and/or the time commitments required for the intergenerational learning projects were challenging. Eaton's (2015) ethnodrama study found that the requirement to meet regularly over a four month period to be a challenge. Reitmaier et al. (2014) also found for a small number of student participants that there were scheduling difficulties as many of their older person partners were busy with social activities and occasionally the older person had forgotten the meeting, due to memory problems. Hwang et al. (2013) and Hwang et al. (2014) flagged lack of time as a limitation in building a relationship with the older person.

Lack of student pre-requisite knowledge and skills in developing a relationship with the older person was identified in several studies. Making assumptions about students' levels of knowledge and skills can be a challenge, for example Bowling et al. (2021) assumed the students would be prepared to communicate with older people but their year of study was not considered. These students were very early in their programme of study and did not have this level of competence. Similarly, limitations in Hwang et al.'s (2014) study was the lack of target education and training of caring and communication skills required to develop a relationship. Davies et al. (2013) also identified how some students struggled to develop a relationship due to being apprehensive about the innovation.

Risks associated with intergenerational learning projects were also identified. The level of complexity of the innovation proved challenging in Eaton's (2021) study as it required an ethnodrama to be created between student /older person dyads and neither cohort clearly understood their co-created scripts. It was only when professional actors interpreted and performed the script did it come to life. Eaton (2021) also flagged how students felt reluctant to challenge negativity stereotyping about students from some of the older person participants although they felt hurt by them. The location or venue where the interactions or visits occur can have an adverse effect, for example Hwang et al. (2014) report that both students and older people met and visited in a large open hall and some of the older person residents complained about the noise from all the conversations.

10. Discussion

Two important and interconnected outcomes of intergenerational learning were changes in student perceptions about older people and a shift to positive attitudinal changes about older people. Students developed an appreciation of the different life experiences of older people in general but also of ageing and how there were both positive and negative aspects to these experiences. This is welcome as it is a primary aim of intergenerational initiatives to reduce ageism and stereotyping (Dinkins, 2019; Gardner and Alegreb, 2019; Drury et al., 2017) and a matter of public policy in many countries, is to improve intergenerational relationships and attitudes (Drury et al., 2017).

According to Grignoli et al. (2015) in response to concerns about intergenerational social exclusion in Europe, the "European Learning Model for International Learning, GUTS: Generations Using Training for Social inclusion 2020" was developed with the explicit aim of improving and promoting intergenerational social cohesion.

A key to mutual understanding and appreciation of life experiences and changes in attitudes and perceptions is being able to communicate, hear and see beyond the superficial or 'first glance'. Evident in eight of the studies was the importance of theme two, 'Connecting and getting to know each other' (Bowling et al. (2021); Davies et al. (2013); Eaton (2015); Hwang et al. (2013); Hwang et al. (2014); Jakubec et al. (2021); Kuo et al. (2021); Reitmaier et al. (2014)). This underpinned much of the intergenerational learning that occurred as it facilitated both cohorts spending time getting to know and understand each other through talking, communicating and working together. Having facilitated discussions provide opportunities to socially connect, develop understanding and help bridge the generational gap (Dinkins, 2019).

Several different intergenerational teaching methods and strategies were identified, including ethnodrama, intergenerational visits, film festival, community gardening, intergenerational service learning and intergenerational narrative learning projects. Despite these methodological differences, what is common to all, is the concept of working in partnership. This approach is also reflected by 'Generations Working Together, nd in that planning is central to intergenerational projects and activities. The variety of initiatives illustrate how important creativity and innovation are when devising intergenerational learning. In view of this, gerontological educational strategies could rely less on classroom based delivery and service care provision and more on creative collaborative intergenerational learning programmes being embedded into nursing curricula.

Essential to the success of intergenerational learning is being aware of and mitigating possible challenges whilst enhancing those factors which facilitate intergenerational learning. The findings of this review illustrate how important having sufficient time for the activity and that participants have sufficient knowledge and competencies. Several studies (Bowling et al., 2021; Davies et al., 2013; Hwang et al., 2014) illustrate the importance of preparing students in advance of the intergenerational activity. Students in these studies required further preparation in theoretical and practical communication and interpersonal knowledge and skills (Bowling et al., 2021; Davies et al., 2013; Hwang et al., 2014). It is also essential to provide a clear explanation of what the activity is and how it can be carried out. This review shows that both cohorts generally enjoyed the experience and felt connected and comfortable. However, in contrast to the detailed information about student learning, there is much less about older person learning. There is little reported on what they learnt about students' lives and what their exact role was within the intergenerational activity. In the context of an increasing drive to make sure that the older person's role within intergenerational learning activities/programmes is meaningful (Agmon et al., 2018), more attention needs to be given to having a clear aim, identifying the guidance needed and determining the benefits for older people if they participate.

11. Implications of this review

This review highlights the importance of intergenerational learning in improving relationships and reducing ageism and prejudice toward older people. This review provides details on the role student nurses play within the intergenerational learning initiatives, however similar, need to be articulated for older person participants. The purpose and benefit for the older person and guidance on the project needs to be made explicit. Future research into the involvement of older people as partners in student learning, to gain deeper understanding of intergenerational learning and to create positive learning experience for both is suggested.

12. Strengths and limitations

A strength of this review is the consolidation of primary research findings, conducted using quantitative, qualitative and mixed methods designs in the context of intergenerational learning. This review gives an insight into the gains that intergenerational learning offers to both older people and student nurses such as increased knowledge and skills, change in attitudes and improved nursing care for older people. However, it is acknowledged that the research studies report more on the effects on student learning and less on older person learning. Limiting the research to English language led to an unavoidable language bias. The variety of different methodologies may limit its generalisability.

13. Conclusion

This review demonstrates the relevance of intergenerational learning in nurse education and highlights the importance of embedding initiatives which will promote and support mutual learning. Innovative intergenerational initiatives enable students to explore their underlying attitudes and views in a way that they may not be able to in the more traditional service and care giving learning situations and should be explored.

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