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Review Article

Using senior volunteers as peer educators: What is the evidence of effectiveness in falls prevention?

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Peer education models are well established as a means of delivering health and social welfare information. Common themes identified in regard to peer education are that information sharing and transfer take place; attempts are made to influence knowledge, attitudes or behaviour; that it occurs between people who share similar characteristics or experiences; and that it relies on influential members of a social group or category. Although it is most often associated with younger age-groups, there is growing evidence of involvement of older people as peer educators. As part of community-based fall prevention interventions, there is considerable scope for contribution by peer mentors. This paper explores the theoretical basis for using senior volunteers as peer educators, discusses advantages and disadvantages of this model of service delivery for health promotion of older people and, specifically, reviews the evidence for effectiveness in relation to fall prevention.

Key words: *fall prevention programs, health information, older people, peer education.*

Introduction

There is a popular view that advice is more readily accepted from contemporaries – those who are similar in age and experience to the recipients [1,2]. Based on this premise, peer education models have flourished since the 1960s and are well established as a means of delivering health and social welfare information [3]. The notion of a 'peer' is tied to identity, but it should not be assumed that age constitutes the only basis for identification between people. Identities derive from a multiplicity of sources including roles that people take on (for example being a grandparent), group categories that they feel they belong to (such as those based on culture or religion) or experiences that they have (such as having a chronic illness) [3].

Common themes that can be identified in regard to peer education are that information sharing and transfer take place; attempts are made to influence knowledge, attitudes or behaviour; that it occurs between people who share common characteristics and similar experiences; and that it relies on influential members of a social group or category [4]. Although peer education is most often associated with younger age groups, its use among older age groups is becoming more common [5,6]. It has been suggested that using trained senior volunteers to inform peers about a variety of health-related topics is an important strategy for promoting healthy ageing [7].

Volunteers have long played a key role in community-based health and social support services [8]. Older people are termed 'highly committed volunteers' as they donate more time than any other age group [9,10]. As well as giving time, they provide the benefits from lifelong experiences. As the baby-boomer cohort ages, they will continue to volunteer but have different needs and expectations in relation to their volunteering [11]. Many view commitment to peer education programs as a way to be active and involved, while contributing to their communities.

Peer education models using trained older volunteers have included programs to provide information about medication management [12], to counsel on the mental health needs of older adults [13], for chronic disease self-management for conditions such as arthritis and osteoporosis [14], to promote wellness and quality of life [15], to encourage healthy eating [16] and increased physical activity [17], to support preventive health screening [2,18], as well as to advise about fall prevention [19]. Despite proliferation of such programs, uncertainty remains about the effectiveness of this model of service delivery.

This paper reviews the literature exploring the theoretical basis for using senior volunteers as peer educators, outlining the advantages and disadvantages of this model of service delivery for health promotion of older people and, specifically, examines the evidence for effectiveness in fall prevention. To identify articles for inclusion in this review Pubmed, CINAHL, Psycinfo, Ageline and Cochrane Library databases were searched using the terms 'peer' or 'lay' and 'education/educators' and 'older people'. In addition, an internet and resource library search of reviews and guidelines in fall prevention in community-dwelling older people was conducted for evidence of the effectiveness of peer education as an intervention. To supplement this search, reference lists of identified articles were also inspected.

Theoretical basis of peer education

Adult learning theory notes the benefit of cooperative learning environments [20], valuing shared learning among peers and peer modelling for change. However, the theoretical basis that underpins peer education models in health promotion is rarely stated [3,4]. Most programs draw on more than one theory base, which often overlap, making examples difficult to identify [4]. Below are some of the theories noted in the generic peer education literature, including that, more specifically, of fall prevention.

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Social Learning Theory

Social Learning Theory [21] has been highlighted as the basis for peer education initiatives that aim to change behaviours [4]. The theory states that the key predictors of successful behaviour change are confidence (self-efficacy) in the ability to carry out an action and expectation that a particular goal will be achieved (outcome expectancy) [22]. Self-management of chronic disease programs use peer educators to assist participants in making management choices and achieving success in reaching self-selected goals [14,22]. Fall prevention programs such as *Matter of Balance* [23] and *Steady as You Go* [24] conducted by senior lay leaders use social learning theory to promote fall self-efficacy and risk management. Similarly, Clemson's *Stepping On* program [20] is designed to enhance self-confidence in fall risk situations, although the sessions are facilitated by health professionals.

Social identity theory

This is the idea that people have multiple 'social identities' derived from being part of a social group [4]. The ability to identify with the group contributes to decision-making regarding membership within the group, and assumes that people are influenced more by people from their group who share similar characteristics. A feature of the *Stay on Your Feet* fall prevention program [19] was that mature age peer educators fostered a positive attitude to growing older and challenged negative ageist stereotyping.

Diffusion of innovation theory

According to this theory, new information is more likely to be adopted and learnt from those who are well integrated and practising the new behaviours [4]. The *Ageing Well and Healthily* program [15] combines health education by a peer educator with low-intensity exercises taught by a professional physical activity instructor. The diffusion of innovations model is used to explain the adoption of the large-scale intervention aimed at promoting a healthy lifestyle among independently living older people.

Empowerment

Underpinning many programs in health promotion for older people are the principles in the Ottawa Charter for Health Promotion (1986) [25]. The Charter seeks to develop personal skills and strengthen community action. Rather than submit to the authority of the 'expert', the emphasis is on fostering self-reliance, autonomy and empowerment in older people [26]. These principles were evident in the delivery of the *Stay on Your Feet* fall prevention program, where an important community education strategy was undertaken by trained empowered role models as peer educators [19].

Theories of behaviour change

A number of theories of behaviour change such as the Transtheoretical Model of Change and Health Belief Models [4] can guide peer education programs to assist with behavioural strategies to increase self-efficacy skills, provide a supportive environment and address barriers to change. Based on these theories, senior volunteer leaders have been used in programs such as those to address perceptual barriers that falls are not preventable [24] or to support older adults in physical activity programs [27].

Advantages of peer educator models for seniors

A review of the literature suggests that there are benefits for using senior volunteers as peer educators in health programs.

Effective communication

The choice of using older people to give information to other older people is based on the assumption that communication among seniors is very effective because of a higher level of rapport between people of the same age [26]. Older people are thought to prefer to seek information from other older people as their first choice [13,28], because they are perceived as offering more credible, less biased information than other potential sources [3]. Importantly, they use lay words so that people in the community can understand and can help overcome taboos and misinformation in socially sensitive areas by using everyday vernacular [18].

As an alternative to communication with health professionals as the 'experts'

Peer education is seen as an alternative to communication with health professionals as the 'experts' [6]. Older adults may be uncomfortable with professionals [13] and reluctant to ask questions because they think it is inappropriate to ask [6]. Information provided by professionals may alienate, rather than encourage participation, by stereotyping older people and thus be inherently ageist [29].

Peer educators are seen as less threatening to many older people who may be wary of seeking professional help [28]. For example, of older people who fell and did not require treatment, only 11% reported having a fall to a health professional [1], presumably because of fear of the consequences of admitting to a fall [1]. Reasons for not doing so include embarrassment, perceptions that a fall will be seen as a marker of ageing, and fear of consequences such as loss of independence (for example, loss of driver's licence) and control (for example, of finances) and risk of institutionalisation [30].

Reaching marginalised groups

Older volunteers with similar life experiences to the target group may be more aware of age-specific problems than professionals [28]. They are more able to access a wide network of extended family, community and social gatherings [31], potentially reaching more socially isolated older people [13]. Culturally appropriate peer mentors may also be useful in providing appropriate advice to ethnic groups [18], and share knowledge about local services for culturally and linguistically diverse groups. Thus, use of peer educators can help expand program delivery by tapping into marginalised groups, which are often most at risk and comprise those who are inaccessible to usual recruitment practices. This includes those with the poorest physical, cognitive and psychological functional abilities, who represent a section of the population at highest risk of falling [30,32].

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Positive role models
Older people selected as peer educators are chosen to be positive role models for their peers and thereby increase the acceptance of the program [19,28]. Positive role models increase patients' self-efficacy or confidence in their ability and serve as a focus for modelling appropriate behaviour [3].

Cost-effectiveness and sustainability
A frequently mentioned advantage of the peer education model is that it is a cost-effective way of delivering an intervention, especially to those on low incomes who may be unable to afford professional fees [13]. With ageing of the population and increased demand for health services, using older volunteers is seen as an alternative model of service delivery, particularly in circumstances of underfunded health systems and lack of sufficient trained health professionals to meet demand [28]. The expectation is that volunteers, particularly older people, are not constrained by time and are seen as a readily available, willing and cost-effective labour resource [11]. Embedding volunteer lay leader programs within community-based organisations aids sustainability [23]; examples include the falls prevention peer education programs undertaken by COTA (formerly Council on the Ageing) (www.cotaq.org.au).

Participatory benefits
For many older adults, the advice and support of another senior who has had many of the same life experiences is the most accepted and successful approach to healthy ageing [2]. Volunteer peer educator programs are seen as empowering older people to achieve and take control over their lives [26], assisting them to become more productive [28]. It also encourages older consumers to participate in partnerships with health professionals and work together to achieve appropriate outcomes [6].

There are also benefits to the peer educator. Volunteering helps improve the physical and psychological well-being of older people by maintaining self-esteem, life satisfaction, access to support systems and activity level [33]. The increased sense of well-being and self-worth comes from providing valued services, and the opportunity for continued learning helps maintain mental acuity, self-esteem and mastery [34]. Peer educators have stressed the value of the knowledge gained and social networking [5]. Many like the opportunity to make a difference in the health and safety of their communities [5].

Disadvantages of peer educator models for seniors

While using senior volunteers as peer educators in health promotion has many advantages, the literature also notes some disadvantages and sounds a note of caution about this method of delivery of health information.

Peer educators as substitute professionals
Health professionals have emphasised the importance of volunteers not overstepping their role, for example, by advising on the use of specific medications [6]. Lay people should not be seen as substitute professionals [1]. Many older people still want an 'expert health professional' to give individual and personalised advice [31]. While peers, as well as respected carers and relatives, are important sources of health information, older people still view their doctors and other health professionals as their most trusted source [35].

Recruitment, retention and training of volunteers
The peer education model relies on a strongly committed body of mentors who are motivated by a belief in what they are doing [31]. Peer educators, particularly 'positive role models', can be difficult to recruit [31]. The service can work well, provided that peer educators are well trained to ensure that they do not operate outside their sphere of competence [6]. However, good training is a costly exercise [11] and there are questions as to what training should be involved and who trains the trainer. The burden on volunteers of training and service delivery can be onerous, and because disability and illness are more prevalent in older age groups, the dropout rate can be high [36]. Support mechanisms are essential. Overall, the demands on the coordinator who is responsible for recruitment and training should not be underestimated [31]. These activities are both time-consuming and labour-intensive, adding more responsibilities to agencies already burdened with limited staffing and resources [36].

Using peer education for fall prevention

Multistrategy interventions targeting a range of fall risk factors have been recommended in systematic reviews of community-based fall prevention interventions [37,38], and most contain a health education module [39]. Education and health promotion programs for fall prevention are used to raise awareness of older people about risk factors for falls, how they can be identified, and what type of strategies can minimise fall risk [40].

Research findings about knowledge, attitudes and/or information needs of older community-dwelling people towards fall prevention have implications for the content, uptake and sustainability of programs [30]. To improve the likelihood of being taken up by older people, fall prevention messages need to focus on positive healthy ageing, highlighting independence, staying in control and living in one's home for longer [35]. Information should counter the belief that falls are inevitable and that nothing can be done [29]. For promoting uptake of, and adherence to, fall prevention interventions among older people, a variety of forms of social encouragement need to engage older people in interventions, including peer role models to illustrate the social acceptability, safety and multiple benefits of participating [41].

In preventative public health, there is considerable scope for utilising peer mentoring to provide a complementary role to health professionals within the broad 'educational and facilitative' arena [31]. In particular, senior volunteers add value to fall prevention programs by giving the program

greater relevance to older people in the community. Same age role models can encourage people to accept information, help break down ageist stereotyping and empower older people to challenge the belief that falls are an inevitable part of the ageing process [42].

The peer educators' role is to increase older people's awareness of the major risk factors for a fall and increase their knowledge of fall prevention strategies through the provision of information to assist in making changes to reduce the risk of a fall. Specific education topics addressed by peer educators in the *Stay on Your Feet* program included advice on home safety, physical activity, appropriate use of medications, healthy diet, safe footwear, necessity for vision assessment and regular health checks [19].

Evidence of effectiveness of peer education in fall prevention

There is no direct evidence of the efficacy of peer-led education for fall prevention compared with other models of service delivery because such studies have not been done in properly constituted randomised controlled trials (RCTs). However, using a repeated measures, single-group design, a fall self-efficacy program (*Matter of Balance*) facilitated by lay volunteers [23] achieved outcomes comparable to those in the original program conducted by professional staff, previously found to be efficacious in an RCT [43]. For chronic disease self-management programs, a systematic review of RCTs comparing lay-led and health professional-led modes of delivery, showed there were no major differences in outcomes associated with who delivered the program [22].

In assessing outcomes, there is limited evidence that education, including peer education, as a single strategy reduces fall rates [44]. Process and impact evaluations reported in studies using quasi-experimental pretest/post-test designs have shown the potential of peer education to raise awareness and knowledge of risk associated with falling [1,45]. However, there has been little formal evaluation of peer education in terms of outcomes such as reduction in falls or fall-related injuries in the target group.

Evaluation of community-based fall prevention programs such as *Stay on Your Feet* [46–48] and *Steady As You Go* [24], which have peer education as one component strategy, demonstrated reduction in fall-related injuries [47] and increased fall risk factor knowledge [24,46–48] in the intervention communities. Because many such community development programs use a multistrategic approach, the specific elements of an effective program are unclear [30] and results cannot be attributed solely to the peer education component.

Conclusions

This review thus suggests that it is difficult to say definitively that the peer education model is an effective model for the delivery of fall prevention information to seniors. There needs to be further research comparing peer education for seniors to other models of delivery, for example using health professionals, including a cost-effectiveness analysis. The peer education model does seem to have the advantages of breaking down communication barriers, reaching marginalised groups, influencing behaviour through positive role models and being sustainable. However, efforts involved in recruitment, training, support and retention of senior volunteers should not be underestimated in planning and costing of such programs.

As part of community-based fall prevention interventions, education by peers has shown potential in preventing falls because of apparent acceptability to older people and capacity to empower them to take preventive action to reduce falls risk [30]. However, there is limited evidence that increased awareness will translate into behaviour modification, which in turn reduces the incidence of falls and consequent injuries. Future research in fall prevention using peer education as a strategy should evaluate outcomes such as falls and fall-related injuries in properly constituted RCTs to demonstrate the efficacy of this intervention.

Key points

- Trained senior volunteers are being used to inform their peers about a variety of health-related topics, including fall prevention, but there has been little formal evaluation of such senior to senior peer education models.
- While identifying the theoretical basis for the peer education approach assists in clarifying assumptions that are being made in the program design, most programs draw on more than one theory base and examples are difficult to identify.
- Reasons advanced for using seniors as peer educators include to break down communication barriers, reach marginalised groups, influence behaviour through positive role models and provide a cost-effective and sustainable program. However, efforts involved in recruitment, training, support and retention of senior volunteers should not be underestimated in planning and costing of such programs.
- There is no direct evidence of the efficacy of peer education models for fall prevention because such models have not been compared with other models of service delivery in properly constituted trials.
- In quasi-experimental evaluation of community-based fall prevention interventions, education by peers, as a stand alone strategy, has shown potential to increase knowledge of risk associated with falling. However, there is limited evidence that increased awareness will translate into behaviour modification, which in turn reduces the incidence of falls and consequent injuries.

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